HISTORICAL PERSPECTIVES OF THE PRACTICE OF INDIGENOUS MEDICINES IN TAMIL NADU WITH SPECIAL REFERENCE TO SIDDHA MEDICINE

Thesis submitted to the University of Madras in partial fulfilment for the Degree of
Doctor of Philosophy (Ph.D.)
in
History

by

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CERTIFICATE

I certify that the thesis entitled **"HISTORICAL PERSPECTIVES OF THE PRACTICE OF INDIGENOUS MEDICINES IN TAMIL NADU WITH SPECIAL REFERENCE TO SIDDHA MEDICINE"** submitted to the University of Madras for the degree of Doctor of Philosophy by **Mrs. D. Dharani** is the record of research work carried out by her during the period from April 1998 to May 2006 under my guidance and supervision and that this work has not formed the basis for the award of any degree, diploma, associateship, fellowship or other titles in this University or any other University or Institution of higher learning.

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DECLARATION

I declare that the thesis entitled **"HISTORICAL PERSPECTIVES OF THE PRACTICE OF INDIGENOUS MEDICINES IN TAMIL NADU WITH SPECIAL REFERENCE TO SIDDHA MEDICINE"** submitted by me to the University of Madras for the award of the degree of Doctor of Philosophy is the record of work carried out by me during the period from April 1998 to May 2006 under the guidance of **Dr. A. CHANDRASEKARAN,** Former Professor, Department of History, Institute of Distance Education, University of Madras, Chennai – 600 005 and this has not formed the basis for the award of any degree, diploma, associateship, fellowship, titles in this or any other University or other similar Institution of Higher learning.

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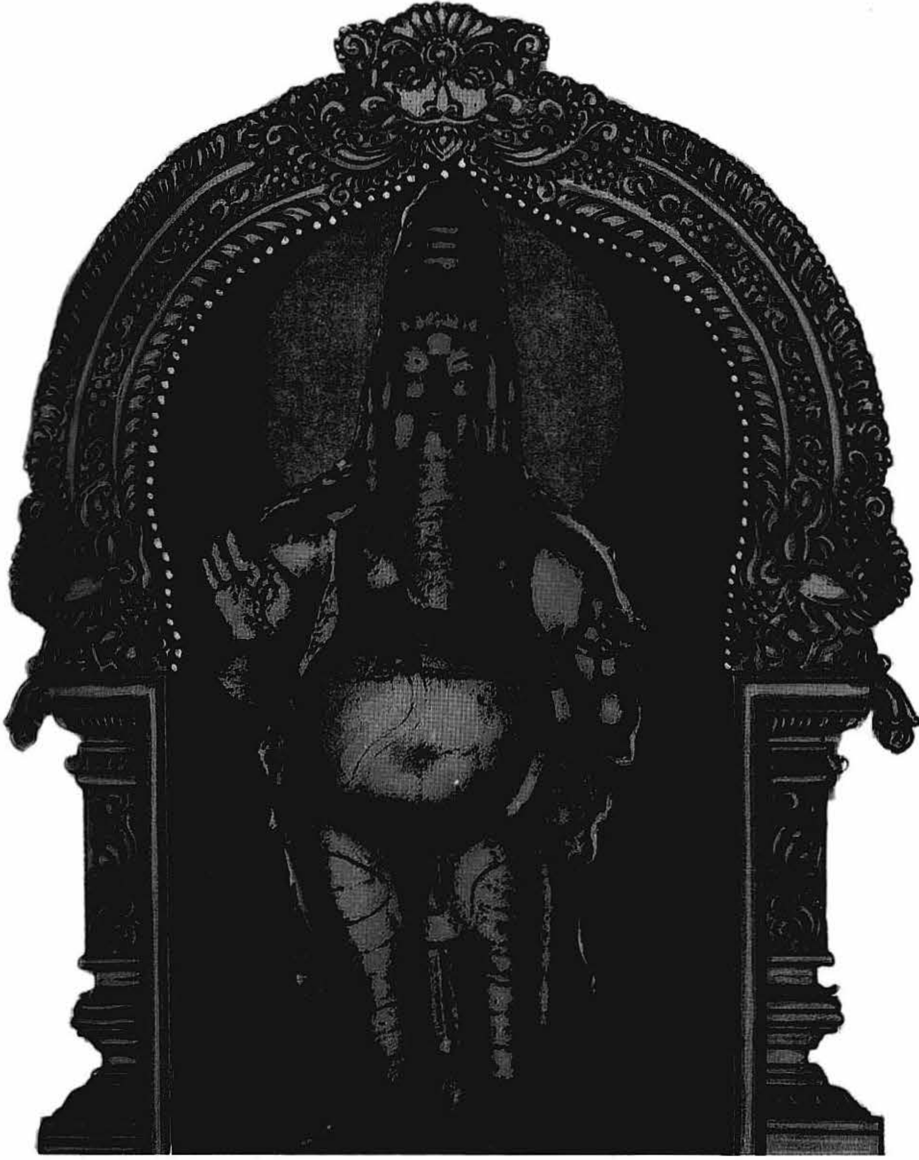
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(Mrs. D. DHARANI)

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Siddhar. AGATHIYAR

The Chief among 18 siddhars, who established Siddhar cult in Tamil Nadu

CHAPTER I

INTRODUCTION

Nature and Scope of the Study

The study of 'Indigenous Medicine' also known as the 'Traditional medicine' or 'Hereditary Medicine' forms part of the history and civilization of a country or a race or a tribe. Started as a remedial measure to treat pain and sufferings of humans in the very early times, the accrued treatment methodologies, over the years, developed into a systematic health care system incorporating the spiritual and mystic beliefs of the respective cultures.

The study of indigenous medical practices throws light on the scientific thought and caliber of our ancestors in the diagnosis and treatment of various ailments in a simple and systematic way. They founded these practices on strong scientific principles and because of that they could stand through the ages and face the vagaries of changes and challenges and are serving the society even to-day. According to World Health Organization more than 70% of the people all over the world still depend on the indigenous medical treatments to get rid of their diseases. The present day medical scientists of various countries, of late, started looking into the indigenous medicines for remedies for some baffling diseases.

In this dissertation, an attempt has been made to record the indigenous medical systems of various countries, their development and rare practices with special reference to those in vogue in India in general and Tamil Nadu State in particular. Emphasis has been given to Siddha Medicine, which forms part of Dravidian culture and has strong roots in the state and is serving the society to an appreciable extent.

The treatment methodologies, rare practices, specialities, the patronage of people to these ancient medical systems, the role of the Central and the State governments in their development and aspects like these have also been described in this study.

When man came into existence in this world he had to depend on nature around him for his livelihood. Nature helped him to get his food, shelter and later the clothing. When he fell ill, he had to depend only on nature to get remedy. The naturally available materials like plants, minerals and animal products came handy to him to treat his illness. Thus, the medicine available today in all systems of medicine has the origin only from the nature to start with. Strictly speaking, the first medical man on the earth was the first man who treated himself to get rid of the illness with the medicine found by him from his surroundings.

To identify a correct remedy for an ailment was not an easy task. He had to experiment it on himself first, then on animals and finally on a set of people who came to him for treatment, in a phased manner. He had to use his wisdom, observation, experience and inquisitiveness to come out with suitable remedies for diseases.

His incessant researches over the years have yielded many wonderful drugs for many diseases. As the time progressed, the treatment methodologies had accrued with him and when people started living in groups, he became the medical man of that settlement. The outcome of his constant research and vast experience became a system by itself and as years passed on, it became the traditional medical system of that region or the tribe. These kinds of developments in the field of medicine were

taking place simultaneously as well as during different periods of time in the history of mankind in different parts of the world.

The countries which can boast of their civilization and culture have medical systems developed by their indigenous people which were based on their religious and socio-cultural ethos. They were founded on strong scientific principles lest they should have been lost several years ago leaving no trace of their existence. When people started moving from one place to another, the medical men too travelled with them, met their counter-parts in the other settlements and enriched their knowledge. As there were no proper medium to record their findings and experiences, the information were passed on from one generation to another by word of mouth, usually from the elders of the medical family to the younger generation. Hence, these medical practices had also been known as 'Hereditary Medical Practices'.

Earlier Developments

The origin of the art of healing is shrouded in darkness of pre-historic times. Before the beginning of the social system, medicine consisted of little more than the natural defence and reactions due to the primitive instinct of self-preservation. This process was well illustrated when pre-historic man removed from his foot the thorn that inflamed it and felt the pain and swelling which slowly subsided soon after. This observation represented the earliest form of the causes and effects of the sequence of thought in medicine which is the basis of present day pathology.

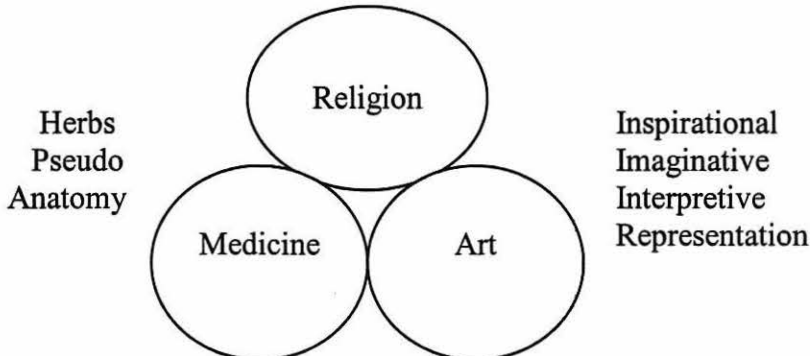
So long as man's ailments were closely related to their causes as the thorn and the inflammation caused by a foreign body, his medical process of thought and their consequent reactions were simple. It was when disease was not easily connected with

Primitive Art Spontaneous

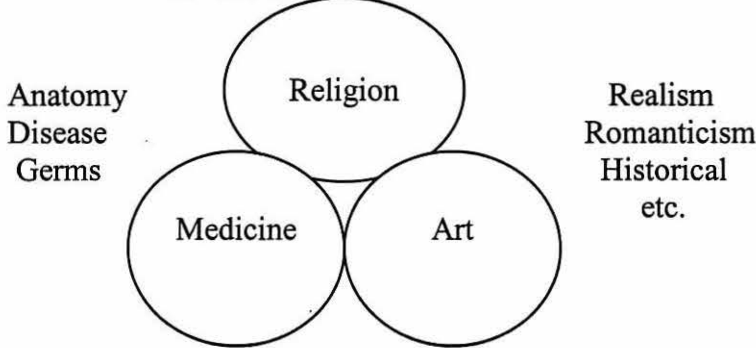
IDOLATRY



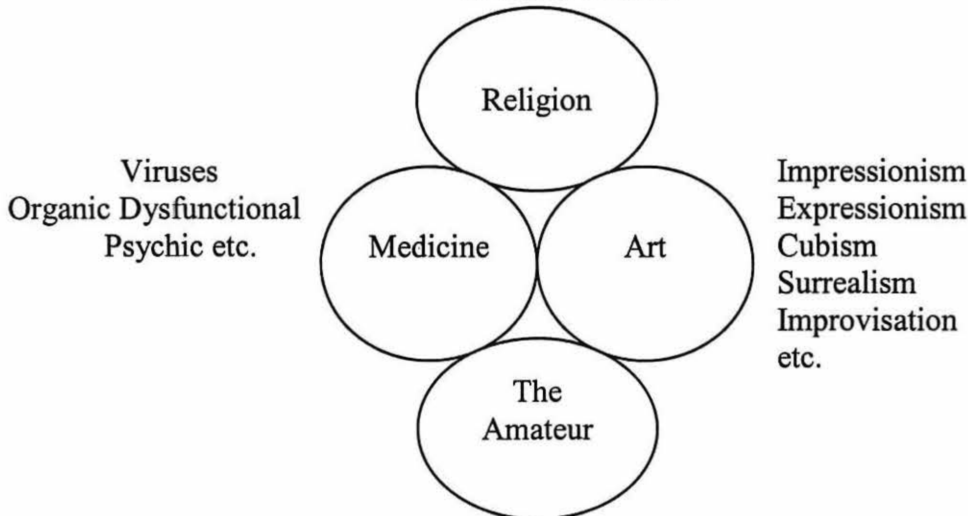
DAWN OF RELIGION



DAWN OF SCIENTIFIC METHOD



MODERN TIMES



Schematic representation of the evolution and interrelationship of religion, art and medicine. The medicine man of antiquity was a combination of all three ages.
Courtesy. Dr. M. M. Melicow

its cause that man resorted to his imagination in his search for relief. Out of this search grew the concept that the internal diseases, for which the pre-historic 'medicine man' could not find tangible causes, were due to an invasion on the body by a special demon. The treatment of this group of diseases consisted in 'driving out' these demons by the practice of magic. This form of religious therapeutics resulted in an endless list of charms, spells, supplications, idol worships and sacrificial offerings, the records of which were handed down to the next generations and had come down to this day through the histories of ancient countries.

This practice of magic was universal, having probably been concurrent throughout the world and strictly similar among all the races. The earliest evidence in the art of healing that is preserved even to-day consists of human skulls from the Neolithic age which show fairly good technical examples of trephining; many of these skulls showed the surgery was repeated several times on the same person. Further investigations indicated that the operation was performed by boring a circular incision with a flint instrument. It is believed that the operation was performed to allow the escape of the demons confined in the bony capsule of the skull, the presence of which was supposed to be responsible for head ache, epilepsy and other cerebral diseases[1]. But, it is not possible to say when primitive medicine gave way to the more rationalistic doctrines and dogmas which constitute the nucleus of modern theory and practice[2].

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[1]J.F. Coupal. **The History of Pathology** (Lectures on the History of Medicine, Mayo Foundation Lectures), W. B. Saunders Co., London, 1933, p.49.

[2]M. G. Seeling. **The rise of Medicine** (Lectures on the History of Medicine, Mayo Foundation Lectures), W .B. Saunders Co., London, 1933, p.75.

Some records are available on the medical systems practiced in the very early periods in a few countries. According to them, there is a vast difference of opinions about the early beginnings of medical science. Many consider it as a branch of science of wisdom and the result of constant working of human mind. There are different views on the founders of medical science too. Some consider the Indians as founders and some are of the view that the Egyptians were the inventors while a section is of the opinion that the Greeks were the founders of medicine. The views on the origin of the medical science may be different, but it is to be pointed out that it was for human survival and because of the result of the profound human thought and observation that medical science has come to stay.

The study of history reveals that the science of medicine was brought up in the laps of spiritual personalities. Their inspirations and dreams have caused enlightenment in human minds. Their experiments nourished the science and furnished people with this kind of thinking and observation[3].

It is to be pointed out that medicine had grown out of and is deeply rooted in superstitions. There are many definitions to support this[4]. Common men and medical practitioners of different times had held different opinions on diseases.

The primitive man ascribed disease to the evil influences of the malignant souls (ghosts, devils etc.), magic and incantations. Some religions believed that many diseases were sent as punishments for sins. The ancient tribes of Australia believed

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[3]S. A. Hussain. "Some saint physicians of Deccan", in D.V. Subba Reddy. (Ed.), **Bulletin of Indian Institute of History of Medicine**, Vol. VI, No.2, April, 1976, pp. 117-119.

[4]Anonymous, **Theories and Philosophies of Medicine**, Literary Research Department, Institute of History of Medicine and Medical Research, New Delhi. 1962, pp.1-4.

that the disease was due to 'Bone Pointing and the separation of the soul from the body'. The ancient Jews considered the disease as an expression of the wrath of God. For pneumatists, all diseases were due to the disturbances of the airy spirit or pneuma. Avicenna great physician of Arabian medicine described disease as an abnormal state of human body because of which, directly or indirectly, some disturbances occur in the function of the body. Fracastorius, (1484-1543) an Italian Physician explained the first scientific statement of the true nature of contagious infection and the germ theory of disease. Paracelsus (1490-1541) precursor of chemical pharmacology and therapeutics of Switzerland stated that all the diseases were the result of maladjustment of the three elements – sulphur, mercury and salt.

Ancient Japanese depend upon the Buddhist theory that maladies were caused by the four elements - fire, water, air and earth. Hoffman (1660-1742) the chair person of medicine of Halle University was of the view that the disease was the outcome of excess or deficiency of 'Tonus'. Theophilus Lobb French born scientist in his 'Medical Principles and Causations' gave in general the causes of the disease as follows:

i. Some excess quantity of one or the other of fluids such as blood, lymph or the nervous fluid found in the body.
ii. Some wrong quality in them
iii. Some deficiency in the quantity of the fluids
iv. Combination of one of these causes

Some European medical Practitioners of the eighteenth century explained that the disease was the result of stimulation or defect of stimulation. Hahnemann (1755-1843) German physician viewed that the disease was the result of weakness of vital force and pathogenic matter called 'psora'. Broussais-French Physician (1772-1838)

affirmed that gastro-enteritis caused most of the trouble to the humanity. Virchow (1841-1902) founder of modern pathology, developed a new theory of 'Cellular Pathology' to explain alterations in the cells that were the essential factors in the disease. Schussles found that the health depended on the 12 salts of which the body was composed of and the deficiency or the excess of any of them constituted the disease. Electropaths alleged that the disease was due to the disturbed proportion of different electric rays in the body. Some medical experts submitted that the disease was caused by irregular composition of four colours red, yellow, white and purple. Psychotherapists claim that psychological factors were responsible for the disease.

The distinctive feature of the 19th century to the concept of the disease was the recognition of its causes. Bacterias were found to be the causative factor for typhoid, tuberculosis and cholera. The significance of endocrinal imbalance, nutritional deficiencies and genetic influences were also recognized in this context. The role of social, occupational and economic factors to the etiology of disease was made clear in this period. Henry Sigerist observed that the disease is the sum total of abnormal reactions of the organism or its parts to abnormal stimuli. Modern pathologists consider disease was due to a great variety of irritations arising from malfunctioning and inorganic poisoning. Dorland's Medical Dictionary defines disease as 'any departure from a state of health leading to illness or sickness'. Stedman's Medical Dictionary describes the disease as an interruption of functions of any of the organs or a morbid change in any of the tissue or an abnormal state of the body as a whole, continuing for a shorter or a longer period[5].

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[5]Ibid. pp. 1-5.

From all the above information, it is clear that medical systems and concepts grew by passage of time resulting in curative activities with greater improvement in this field.

OBJECTIVE OF THE STUDY

In this study, an attempt has been made to systematically record the scattered information available on the history of indigenous medicines in general and those practiced in Tamil Nadu in particular. Special emphasis has been given to the uniqueness and rare practices in Siddha system of medicine hitherto not attempted by the earlier researchers.

Further, in most of the writings on the history of India or Tamil Nadu, only scanty references have been made about indigenous medical practices even though they form part of the culture of the Indian society. Presently, the Central and State governments pay more attention on the development of indigenous medical practices as they receive increased patronage by the natives and the greater attention of foreigners. Also, it was felt that indigenous medicines had proved to be effective in curing many diseases. Hence, there is an imperative need to record their growth in a systematic manner.

SOURCES

The sources for this study are both primary and secondary. The primary sources include ancient manuscripts on medicine, the government records of the Public, Municipal and Medical departments, journals and magazines dealing with traditional medicines, seminar reports and proceedings and articles from the news papers such as '*The Hindu*', '*The Indian Express*', '*Deccan Chronicle*' and

'*Dinamalar*' besides personal interviews with personalities contributed to the development of Siddha medicine. The secondary sources include few published books and articles related to this field.

REVIEW OF LITERATURE

It was observed that many published literature on indigenous medicines available in the Tamil Nadu Archives and Historical Research, Chennai, Indian Institute of the History of Medicine, Hyderabad, Saraswathi Mahal Library, Thanjavur, International Institute of Tamil studies, Chennai, Dr. Ambedkar Indian Medicine Library, Chennai, and Oriental Manuscripts Library, Chennai deal mainly with diseases, treatment methodologies, drug preparations, information on herbs used in the practices, instruments connected with treatment and surgical methods. The historical information on ancient medical systems is very less.

However, in a Doctoral thesis entitled 'History of medicine in South India with special reference to Tamil Nadu up to 16^{th} century A.D. submitted to the University of Madras by R. Niranjana Devi, the author has presented some historical information available in some books and related them to epigraphical evidences. Another thesis 'Siddhars Alchemy and abyss of Traditions: Traditional Tamil Medical Knowledge in Modern Practice', by J. Gary Hausman, Department of Anthropology, University of Michigan, USA deals with the Siddhar's role as Alchemists, Pharmacists and bone-setters besides covering some areas of Siddha medicine broadly.

Other than these works, studies on the traditional and indigenous medicines are very scarce. There are also a few articles in certain periodicals like *Herald of Health*. But they deal with a few aspects of the indigenous medicines only. A

comprehensive study has not so far been undertaken by any researcher and hence an attempt is made in this direction. Since such a work is undertaken for the first time, descriptive method is followed in this work with some analysis.

CHAPTERISATION

The thesis is divided into five chapters.

The first chapter forms the introduction and explains the nature and scope of the work with a description of the source materials. The methodology adopted and the objectives of the work are also given in this chapter.

The second chapter traces the traditional medical practices of various countries of the world. The richness of these systems and their relevance in the modern world are also highlighted. In the later part of this chapter, focus is made on the practice of folk medicine and alternative medical practices.

In the third chapter, the details about the indigenous medical practices in India are enumerated. The historical perspectives of the practice of these medicines in various periods are discussed with the help of source materials.

The fourth chapter gives a comprehensive presentation on indigenous medical practices of Tamil Nadu with special reference to Siddha Medicine during different periods of time. The role played by the Central and State governments in the popularization work and development of these medical practices in Tamil Nadu are also discussed.

Chapter five contains a discussion on the significance of indigenous medicines in the present day life besides the views of indigenous medical practitioners and general public on the utility and benefits of these medical systems in the present day health care needs.

Finally, in conclusion, the findings of the study are presented with a critical discussion.

CHAPTER II

TRADITIONAL MEDICINES OF VARIOUS CIVILIZATIONS

The importance of medicine can be understood only when the health and life are at stake. Hence, medicine is of paramount importance and therefore it deserves a most careful study. This type of study or investigation will lead to a better understanding and appreciation of the value of medical science and of the discoveries and opinions of able men in this field belonging to different nations. Also, such studies are undertaken for the advancement of medical knowledge throughout the world. As one traces the progress of medical science in different ages, countries and among different people, he can understand the details by means of which new facts are collected and the beautiful structure of nature is unfolded and he can ascertain the great achievements of civilizations of different countries in the field of medicine. Hence, a glance at the growth of medical science in various countries of the world through the ages will give an insight into the different dimensions of medical science.

Beginning of the Book of Medications

To get rid of the diseases of the body

stir plant with vinegar

to drink by the patient

the same for the stomach, which is ill

Cuminum* (fraction of g)

Geese lard (fraction of g)

Milk (up to 0.6 l)

* Aromatic seeds from *Cuminum cyminum* (family Umbelliferae), a dwarf plant native to Egypt and Syria

A small portion of the Ebers papyrus. This Egyptian document, written about 1500 B.C., contains the recipes for more than 800 prescriptions. It also describes about 700 drugs of animal, vegetable, and mineral origin. (English translation courtesy of Dr. Gunter Reiss.)

Courtesy : Essentials of Environmental Toxicology by W.W.Hughes, Taylor and Francis, Washington DC, USA, 1996 p.4.

EGYPTIAN MEDICINE

From the mosaic writings one can find that Egypt is one of the most ancient and early civilized countries in the world. In ancient times, Egypt was considered to be the great seat of knowledge and learning. The development of medical culture in Egypt dates back to fifth or sixth millennia. The early documentation of this culture was very scanty and mostly they are on papyrus, a very fragile material. It is very difficult to give a precise view on the evolution of medical thought in Egypt. Egyptian medicine was mystic and priestly in those times in which the oriental influence prevailed[1].

The sources for the History of Egyptian medicine are found in a number of medical papyri - the three most important are the Ebers Papyrus, the Brugsch Papyrus and the Edwin Smith Papyrus. Another important papyrus is the Kahun Medical Papyrus, discovered in 1889 by Sir Flinders Petrie in the Faiyum which is ascribed to the 12th or 13th dynasty (2000-1800 BC) whose legible fragments show that it dealt entirely with gynaecology. The date at which the Ebers Papyrus was written can be reckoned from its astronomical systems which is between 1553 and 1550 B.C. It is a collection of medical texts twenty metres in length, in a perfect state of preservation. It was discovered by Ebers at Luxor in 1873 and preserved in the museum of the University of Leipzig. The Brugsch Papyraus at the Berlin museum is regarded as having been written about 1200 B.C. The Edwin Smith Papyrus which is regarded as

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[1]H. Eduljee. **History of the Medical Art – Past and Present**, Education Society's Press, Bombay, 1880, p.4.

earlier than the Ebers Papyrus, serves as an excellent source of Egyptian medicine which was practiced in the second millennium. It is interesting to note that in the ancient Egypt, at the dawn of history, two oldest medical literature as theoretical treatises were found - one deals with physiology and the other with pathology.

The religious origin of anatomy is particularly evident among the ancient Egyptians for whom life on earth was a mere episode and hence they preserved the bodies of the dead. The major organs were known to them and they had names and it was believed that they were all connected to one another either directly or via the heart through a system of canals or vessels, which ran in pairs or in groups of three and carried air, blood and all that are necessary for life. In these literary works, details about the organs of the body and their functioning were explained. For example, the heart was considered as the central organ of the body and its beat was felt as the pulse. It was also considered as the seat of thinking, feeling and other nervous functions[2].

In Egyptian mythology, Gods concerned with health had an important place. The control of health was attributed more or less to all the Gods. The most important was Thoth, and others were Isis, the Goddess Sehemet (for diseases of women), the god Set and the special God of medicine, Imhotep[3]. Diagnosis and therapeutics appear to have reached a fairly advanced position among the physicians of the Egyptian medicine. The therapeutics consisted of a mixture of mystic and rational approaches.

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[2]Anonymous, **Theories and Philosophies of Medicine**, Institute of History of Medicine and Medical Research, Delhi, 1962, pp.4-10.

[3]O.L. Bettmann, **A Pictorial History of Medicine**, Charles C. Thomas (Publisher), Illinois, 1956, pp.2-3.

Materia Medica

For remedies, the Egyptians mostly used honey, beer of various kinds, yeast, oil, dates, figs, onions, garlic, flaxseed, fennel and a few other items like these. Minerals such as salt, alum, antimony, copper, sodium, carbonate and many unidentified materials were also utilized as drugs[4]. It is said that there were forty two books, of which thirty six were on Egyptian philosophy and the remaining were devoted to medicine. The direct medical agents of God were priests and so the Egyptian medicine in its essence was a type of priestly medicine, practiced by two orders of priests. The higher order devoted themselves to the supposedly higher phase of medical science such as conjury, prayer, charms and revelations and were required to master the first 36 of the Hermetic books; the lower order of priests who practiced everyday medicine, had as their special duty to master the last six of them which deals with anatomy, pharmacology, surgery, pathology, ophthalmology and gyneacology. Besides these two groups, there were two other orders of physicians – the military physicians and veterinarians[5]. According to George Ebers one of the six books named 'On Medicaments' is the oldest medical record that has come down to the present day. The Egyptian priests, who were nominated by the monarch, were the first cultivators of science and the administrators of law of the land and they performed both medical and ecclesiastical functions. The priests stood as the richest and they were most powerful and most venerated. The Egyptian doctors enjoyed such a high reputation that the rulers such as Darius and Cyrus had them in their court.

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[4]Anonymous, **Theories and Philosophies of Medicine**. Op. Cit, pp.13-14.

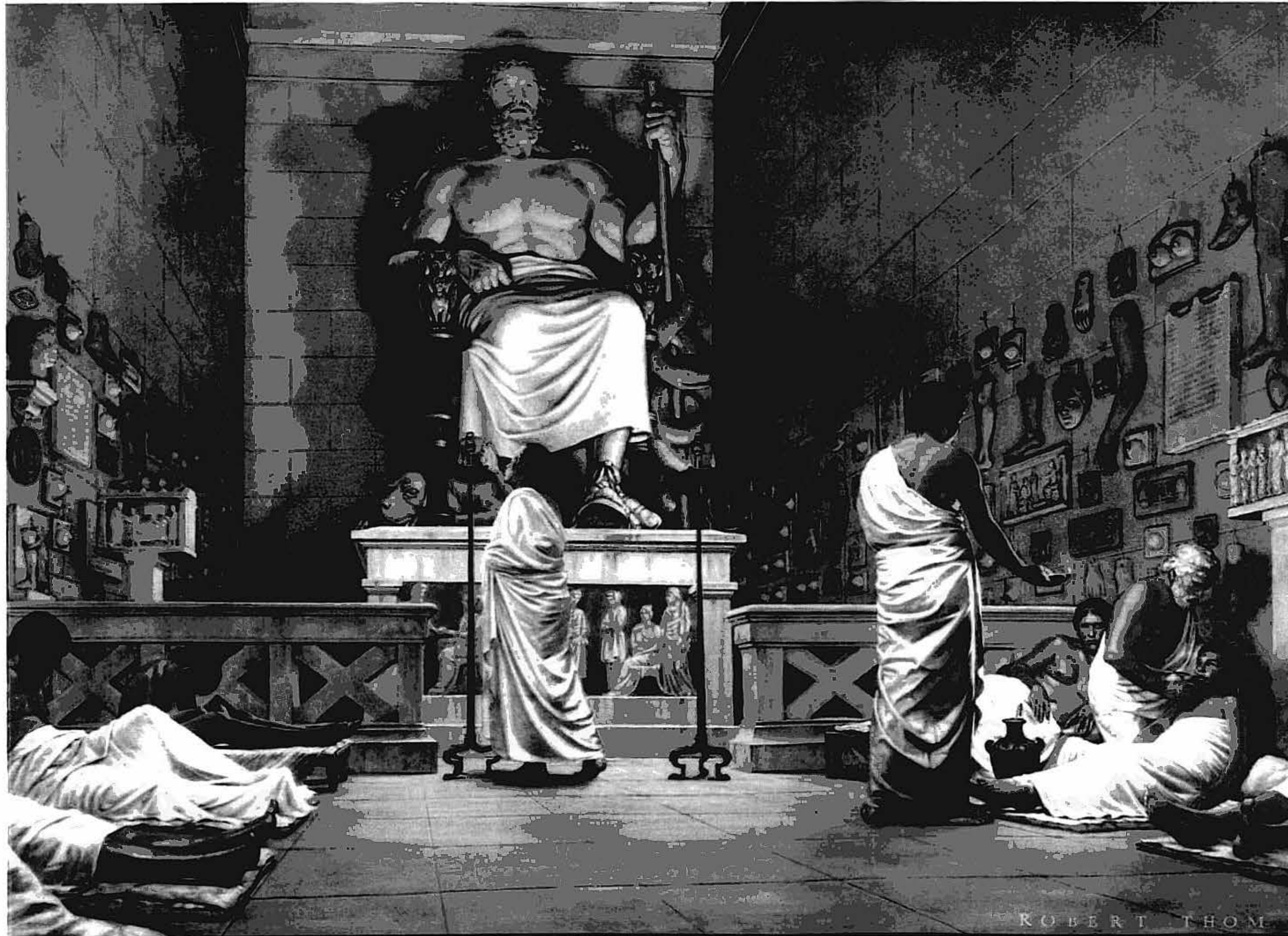
[5]M.G. Seeling. **Medicine – An Historical Outline**, Williams and Wilking Company, Baltimore, 1925, pp.15-16.

The physicians received their salaries from the treasury but they were obliged to conform in their practice to the rules laid down in their books. Severe punishments were imposed on the practitioners if any patient died due to wrong treatment. The temples, especially those of Thebes and Memphis served as asylums for the sick. Records of their observation and treatment methodologies were maintained and the juniors used them in their study. When medicines failed, they trusted exclusively the magical incantation, charms and amulets. The superstitious practice of wearing amulets took its origin in ancient Egypt.

Herodotus explains that the medical profession was sub-divided in Egypt, each physician treating disorders of a particular organ of the body only. There were some to treat disorders of the eyes while others attended to diseases of the head; some practiced dentistry and others confined themselves to the treatment of the diseases of the abdomen. As the physicians were forbidden to practice two branches of the profession, there were a considerable number of them in Egypt. Homer calls each Egyptian a medical man.

The Egyptians had made great advances in surgery and Philoxennes was the author of many books on this science. From the ceiling and wall paintings of the temples at Tentyra, Karnac, Luxor and in a few other places, it is understood that the instruments used for amputations are very analogous to those of the present day.

The Egyptians had also acquainted with filling the decayed teeth with gold as evidenced from the mummies excavated at later years. The embalming of the dead was practiced in Egypt at a very early period. Most of the times, the priests acted as



THE TEMPLES AND CULT OF ASCLEPIUS. Every night for a thousand years, sick and afflicted pilgrims flocked to the Grecian Temples of Asclepius. Healing and advice were sought during dream visitations by the ancient god of medicine.

physicians. There were abundant medicinal herbs in Egypt which the natives made use of to treat thediseases[6]. In the field of hygiene too, the Egyptian medicine reached a high degree of progress and it may be stated that there existed a true social medicine. Detailed regulations were in force for the burial of the dead and strict rules were prescribed for the cleanliness of the dwellings. Thus, the Egyptian medicine which is a combination of empirical rationalism and mysticism, constituted a valuable basis for further development of medical science[7].

GREEK MEDICINE

The development of medicine in Greece illustrates the influence of environment on national thought. The Greeks established contact with neighbouring countries and developed the natural sciences and medicine systematically.

Hippocrates was the first in the history, rationalizing medicine and converting it from an esoteric art practiced by the priests into a discipline resting solely on the firm basis of observation reinforced by most carefully guarded deduction. A subtler critical mind than his has never graced the art of clinical medicine and the principles of clinical analysis, which he laid down, constituted the foundation of what is called today the 'bedside method'. He wrote a large number of aphorisms or short comments on diseases that read like the dictated bedside notes of a keen present day clinician establishing a true relationship between particulars and generals and accidentals and essentials. He also wrote admirable treatise on fractures and

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[6]H. Eduljee. Op. cit, pp.5-9.

[7]Anonymous, **Theories and Philosophies of Medicine** Op. cit, p.14.

dislocation, wounds of the head, prognosis, ulcers, epidemic disease, climates and epilepsy. He is supposedly the author of the 'Hippocratic Oath' and the earliest and most impressive documents in medical ethics.

During the days of Alexander the Great, a museum and library were founded, where the finest tradition of Greek medicine throve for several centuries. Two men stood prominent during the early Alexandrian period, Erisistratus and Herophilus both clinicians of the Hippocratic stamp. They taught that the brain was the center of the nervous system and there was a difference between veins and arteries[8]. It is really significant information to note that the Greeks possessed an advanced knowledge in the physical systems of humans.

Origin of Greek Medicine

In the history of medicine, ancient Greece offers an extremely complex problem because of the difficulty of distinguishing chronological periods and indicating atleast approximately, the moment at which Hellenic medicine began to possess sufficient information to constitute a particular system. Also it is more difficult to separate medicine from the rest of the culture to which it is closely connected and those who preceded the Greeks. It grew out of the influence of people who had their effect on the Hellenic Culture they inherited[9].

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[8]Anonymous, **Lectures on the History of Medicine** (Mayo Foundations lectures), W. B. Saunders Company, Philadelphia & London, 1933, pp.78 -80.

[9]E.H. Ackerknecht. **A Short History of Medicine** (Revised Edition), The Johns Hopkins University Press, Baltimore & London, 1982, p.47.

Ancient Greek medicine is incomparably close to modern medicine than any other historical form of medicine. This is hardly surprising since modern medicine would not exist without the Greek precedent. It is no accident that modern medical terminology is to such a large extent based on the Greek. There are of course numerous differences between the present day medicine and Greek Medicine, even as there are variations within Greek medicine itself. It must be remembered that Greek medicine covered a period of about 1000 years and that far from being static; it was in a ferment of continuous change and ebullition. Yet, the successive epochs of Greek medicine had one thing in common with each other and with the medicine of modern times. Disease was no longer regarded as a supernatural phenomenon; it was approached from a rational, naturalistic and scientific point of view.

Alemaeon is said to have been the first Greek anatomist who dissected the animals and discovered the optic nerves and the Eustachian canal. Specially interesting in his description is about the disease which he defined as 'a disturbance of the equilibrium of the vital activities by the predominance of one of them', a definition consonant with the views of the Greeks who loved to see harmony and proportion in all things.

Democedes (about 520 B C) was the first physician about whom we have a trustworthy history. According to Herodotus, Democedes migrated from Croton to Egina, and excelled in his field and was chosen as a Public Medical Officer at a salary of one talent (240 pounds) per annum. In the following year, he went in the same capacity to Athens where he received 406 pounds and finally he was invited to Samos by Polycrates who paid him 480 pounds a year.

The story of Democedes is important to show that there was a well established and extremely well paid public medical service in the Greek cities in 6th century B. C. Physicians were quite distinct from priests in ancient times in Greece and Rome.

In ancient Greece, besides physicians, there were three classes of men connected with the healing art and they were priests, philosophers and gymnastic trainers, corresponding roughly to our faith healers, pure physiologists and bone-setters respectively. The profession of medicine was separate though to some extent it was indebted to the priests[10].

As the human body was held sacred in Greece, pathologic investigations were practically not done. Greek pathology rested on the number-lore of Pythagoras and consisted of the four terrestrial elements air, earth, fire and water, which produced the four conditions of dryness, moisture, heat and cold. Within the body existed the mystic tetrad blood, yellow bile, phlegm and black bile. These three sets of sacred fours and their interaction constituted the basis of disease known as 'Humoural Pathology'.

Hippocrates first separated medicine not from the priest-craft but from philosophy. Several of the older philosophers are said to have rendered aid in epidemics and have treated their friends and pupils medically, but of more important are the influences, which their views on nature had upon medical theories and their early attempts at anatomy.

Hippocrates, the father of medicine, was the first physician to apply the true

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[10]E.T. Withington. **Medical History from the Earliest Times**, The Holland Press, London, 1964, pp. 42-46.

scientific observation at the bedside and his descriptions based on the careful quality of this highly developed faculty remain even today with some improvement. He described many pathologic conditions including malformations, inflammation, ulceration, new growth, diseases of the bones, skin, nose, throat, rectum and external genitalia. His writings indicated that he recognized that diseases ran a certain courses and he was the first to use the terms 'Scirrhus', 'Carcinoma', 'Poly', 'Empyema', 'Puerperal septicemia', 'Epilepsy' and 'intermittent fevers'. This extensive knowledge indicates that if postmortem examinations were done during his time, the Greek contribution to medicine would have been stupendous.

The etiologic phase of his descriptions made a close approach to the medicine of 1500 years after his time. He recognized the meaning of suppuration and must have had instinctive ideas of antisepsis because he advised that water should be of highest purity or boiled and should be used for irrigation of wounds. The Alexandrian school, which flourished from 400 to 300 B.C. gave Greek Medicine its first real anatomy and pathology. Postmortems were often performed and even a form of vivisection was allowed on criminals. This period witnessed the beginning of a marked advance in pathology in Greek Medicine[11].

[11]Anonymous, **Lectures on the History of Medicine**, Op. cit, pp. 54-55.

MESOPOTAMIAN MEDICINE

In the fourth millennium before Christ, in the southern Mesopotamia, a systematic medical concept had developed from which the Assyro-Babylonian medicine was born[12]. According to researchers the seed of civilization was sown between 4000 - 3000 B.C. by the Sumerians. These people made the inhospitable lands to habitable and fruitful by building canals. They laid the foundation for the ancient oriental cosmogony, religion, astronomy and natural science[13].

Babylonic Assyrian medicine may in general be said to possess a theurgical-empirical character and was deduced from the experience and facts which were acquired empirically and systematized from the point of view of a demonistic religion coloured by astrology.

Disease was always considered as something foreign to the body and personified as an 'evil spirit; cure resulted from the expulsion of the evil spirit, by counter action or expulsion of the *materies morbi* in the secretions and excretions (phlegm, bile and wind were considered the causes of colic and other abdominal affections).

Prayers, ritual observances, exorcisms, magical formulae, amulets and symbolical manipulations, accompany or obscure a therapeutic formulary rich in healing agents as well as in other remedial measures.

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[12]Anonymous, **Theories and Philosophies of Medicine**, Op. cit, pp.17.

[13]M. Newburger. **History of Medicine**, Imperial University of Vienna, 1910. p.11.

The Babylonians and Assyrians distinguished many kinds of diseases, the classification having naturally a symptomatic basis. Head disease, eye, ear and nose affections, diseases of the mouth, lips, tongue breast, stomach ache, colic and other abdominal complaints, ailments of arms, fingers, and nails, diseases of the skin and venereal complaints snake-bite, scorpion's sting, women's diseases, children's diseases and others are found in their writings. Babylonians considered the mental disorders were caused by the magic of demons and the witches were considered to have their seat in the heart. Epidemic diseases find frequent mentions but the means of definite identification were lacking. In the pursuit of the doctrine of inter-relationship of the human body with the universe, the micro with the macrocosm, it is probable that individual anatomical regions were placed under the domain of the signs of the zodiac. The belief in the influence of numbers and particularly in the malignity of the number 7, absolutely forbade that the physician should touch the patient on the 7th, 14th, 21st or 28th day of the month.

The Mesopotamian physicians were part of the priesthood. Medical remuneration and the legal regulation of the medicine were accurately defined as early as the reign of Hammurabi (2200 B.C.)[14]. In the Babylonian recommendations of remedies for a particular symptom, there is no indication that various medications were to be used at different stages of a disease. The medicine of ancient Mesopotamia is perhaps the most ancient of which there is a clear knowledge; it was dominated by a concept that was essentially magical and priestly. The first people in the history of civilization in Mesopotamia are the Sumerians who established

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[14]M. Newburger, H.F. Hodder and Stoughton, **History of Medicine**, Oxford University Press, London, 1910, pp.14-16.

themselves in Babylonia. The earliest medical tablets came from those distant times in which the kingdom was divided into two parts – northern part called 'Akkad' and the southern areas were known as 'Sumer'. The celebrated Kuyunjik collection in the British museum contains the remains of the great library of the King Ashurbanipal (668-626 B.C.) at Nineveh consisting of about 25,000 tablets. This collection constitutes the chief source of the knowledge of Babylonian medicine.

The medical evolution of the Babylonians began 6000 years ago and nearly 4000 years before the Greek medicine emerged. The cardinal feature of their system was polytheism. Certain Gods caused illness as a punishment for sin; other Gods cured diseases as a reward for goodness. The action of Gods upon man was direct; the service of man to God was indirect. The intervention of a priest being required. He who served the Gods lived happily on earth, and he who neglected them or transgressed their commandments was punished. The Babylonian concepts could be compared with their contemporary Egyptian concepts, but of course in a more advanced stage. Their priests appeared to have been less powerful for they relied less dominant as they relied less on magic. They were more intellectual and without caste.

In Mesopotamia, there were three major types of priests dealing with sick people. One was the *baru*, the seer or a priest specialized in divination. He knew omens and how to interpret them. The next and probably the most important member of the medical corps was the *ashiper*, the exorcist or incantation priest. His task was to perform the rites required for driving out an evil spirit from the body of a patient and for reconciling him with his God. The third group of healing priests were *asus*, who devoted all their activities to the sick and who, in addition to charms, knew drugs

and were able to perform surgery. *Gula* was a great female physician who resuscitated the dead by touching them with her hands. The most ancient medical God of Mesopotamia was Sun and also the moon, who governed the growth of medicinal herbs, some of which for this reason should not be exposed to the rays of the Sun.

Diseases of the eyes must have been frequent because a number of texts regarding this were found in great number. Similarly the disease of respiratory organ also seems to be common. An Assyrian tablet gives a good description of bronchitis. The Materia Medica of Mesopotamia includes about 250 medicinal plants, 120 mineral substances and 180 animal and other products, mostly unidentified drugs[15]. This Materia Medica was very similar to that of Egyptians. Among the vegetable drugs, fruits such as grapes, apples, pomegranates, figs, common vegetables like garlic, onion, leek, bean, lupin, lettuce, cucumber and pumpkin, cereals like barley, wheat, millet or spelt spices and condiments were used to a great extent. Fennel, saffron thyme, mustard caraway seed, chicors, turmeric or flowers like rose and anemone, trees and shrubs like date palm, cedar, cypress, pine, tamarirk, laurel, juniper, myrtle etc. were also used in the medicare[16]. Apart from these, many animal products were also put to use, the examples include organs of cattle, sheep, goat, pig, donkey, dog and wild animals like lion, wolf, fox, gazelle, mouse and frog. Some birds like chicken, pigeon, raven, stork, swan, owl, falcon, and vulture etc. were also used.

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[15]Anonymous, **Theories and Philosophies of Medicine**, Op. cit, pp. 19-25.

[16]J.E. Swain. **A History of World Civilization**, Eurasia Publishing House Pvt. Ltd., New Delhi, 1964. p.79.

Babylonians and Assyrians had considerable knowledge of mineral substances. Sulphur was used in the treatment of skin diseases. Among the chemical elements and compounds white and black sulphur, sulphate of iron, arsenic, yellow sulphide of arsenic, arsenic trisulphide, black saltpeter, antimony, iron oxide, magnetic iron ore, sulphide of iron, pyrites, copper dust , verdigris, mercury, alum, bitumen, naphtha, calcined lime and a variety of unidentified stones were also used in the drug preparations.

The importance of the surgeon in ancient Mesopotamia is mentioned in the code of Hammurabi, written about 1900 B.C. which contains very significant statements about the physicians strictly as a professional and how frequently surgical procedure were to be carried out by them. These statements have a very great historical value because they established for the first time the concept of civil responsibilities of the physicians.

A notable feature of the code of Hammurabi is that there enshrined a code of ethics, which raised the standard of medical men to a high level, by fixing substantial remuneration and punishing them for transgressions due to ignorance.

The great civilizations of Egypt and Mesopotamia were contemporaneous and developed in neighbouring territories. Their medical systems consisted basically of magic, religious and empirical elements. But in Mesopotamia, magic and religious practices maintained their dominating influence to the very end.

Both Egypt and Mesopotamia had much influence on their neighbours- the peoples of Syria, Asia-Minor and the islands of the Eastern Mediterranean. The Hebrew people survived all vicissitudes of their history and played an important role

as transmitters of oriental knowledge to the Christian West as well as the Islamic East. Deeply influenced by Mesopotamian civilization, they were also in close touch with Egypt. They had no medical literature proper but the books of the Old Testaments reflected medical views and passed them on to the medieval world in the West and in the East. Bibilical medicine is linked between the ancient orient and mediaeval Europe.

The conquest of Babylonia and Egypt by the Persians in the 6th century B.C. marked the final eclipse of the ancient Orient. As long as Mesopotamian civilization was creative and strong, it assimilated foreign conquerors without difficulty but even in the 6th century B.C. when it had completed its long course, it was strong enough to imprint its stamp upon the Persians, who wrote their triumphant inscriptions in cuneiform script and borrowed and adopted elements of Mesopotamian art. Babylon, once more became a world capital when Alexander the great established his residence there in 330 B.C.; but his sudden death eight years later prevented the city from becoming a glorious centre of a great Graeco-Asiatic empire.

Another channel through which Mesopotamian medical lore was transmitted to the Middle Ages was the Syrian medical literature, which flourished in the Schools of the Nestorians in Mesopotamian soil. Consisting of the most part of translations from the Greek, it nevertheless included many early oriental elements. When Babylon fell to the Persians, a new medicine was created by the Western branch of the Indo-European family, the Greeks and by its Eastern branch Indians[17].

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[17]Anonymous, **Theories and Philosophies of Medicine**, Op. cit, pp.31-39.

PERSIAN MEDICINE

The ancient Persian medicine is known through their religious book Avesta, particularly the sixth book, the Vendidad. In this, purification of the body as well as of the mind is prescribed. The Vendidad codifies the medical practice, also the practitioners honorariam and the tests to which he must submit before being admitted to practice[18].

In all probability their views and methods were the same as those of other anicient people such as early Babylonians and Assyrians, inhabitants of the Mesopotamian plains and Persian foothills. It is clear that the Persians even before they conquered the Assyrians in 538 B.C. had largely adopted the medical and sanitary ideas of their neighbours of the plains.

The Avesta or Zoroastrian Bible consists of the Yasna, the Vendidad and the Bundahism, and is said to have consisted of 21 books or a million verses. These were revealed by God to Zoroaster and by Zoroaster to Gushtasp, the King of Bactria, the patron of the faith.

The underlying principle of such parts of these works which is concerned with medicine is the belief in the war in nature and the law of nature. The war is described as a storm which is always raging and Indra is in battle with the serpent Azi, who has carried off the Goddesses and kept them captive in the folds of the clouds depicting that the two principles good and bad are constantly opposing each other. But fortunately for human beings for every disease which the genius of evil is allowed to set upon the earth there exists also a remedy[19].

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[18]A. Castiglioni. **A History of Medicine** (Translated from Italian), E.B. Krumbhaar, (Ed.), III Edition, Routledge and Kegan Paul Ltd., London, 1947, p.82.

[19]Anonymous, **Theories and Philosophies of Medicine**, Op. cit, p.42.

Aryam conquers all sickness and death just as the evil genii produce them. The most powerful evil spirit created by Angra Mainyu was killed by Thraetona who is therefore considered as the inventor of medicine. To him 'Ahur Mazda' the supreme spirit of God gave ten thousand healing plants.

The belief in demoniancal possession as the cause of disease survived into Sassanian times and consequently the cure was the recital of sacred spells. So the supreme high priest of country was ordained to control and direct the work of the medical profession[20]. At the same time it was understood that physical and natural causes also played their part cold and heat, stench and dirt, hunger and thirst, anxiety and old age were all recognized as causes of natural disease. Intemperance and bad habits also contributed to the development of diseases. The part that the blood played in the dissemination of disease through the body was recognized.

The carrying out of all medical and quasi-medical matters was in the hands of a special body of men. Physicians, however, were still drawn from the priestly class, the highest of the four Iranian classes, the others being the soldiers, the farmers and the artisans. Occasionally persons from the agricultural class, if specially experienced, were also included in understanding the medicinal qualities of herbs and plants might rise superior to their birth and enter the ranks of the medical profession. This priestly class made a special study of theology according to their personal wish. Those, whose duties were mainly therapeutic were called Athravans. Medical training must have taken place in Ray, Hamadan and Persepolis. The training included a study of the

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[20]A. Castiglioni. **A History of Medicine**. Op. Cit. p. 83.

theory of medicine and a practical apprenticeship and this continued for several years. Three kinds of practitioners came out from the schools and they were healers with holiness, healers with the law and healers with knife. The first were the most highly trained. The sun was recognized as the first great cleaning power, clothes which had been worn by a person suffering from an infectious disease were ordered to be destroyed and anyone selling such cloths committed a crime and was liable to heavy punishment. In the most satisfactory method of purification the purity of water was to be maintained by allowing no filth to be thrown into it and by not allowing it to be deprived of its natural purity.

The sacred texts frequently refer to the existence of rules for testing the skill of candidates before they were allowed to practice. Surgeons had to undergo a very severe trial before they were allowed to operate. This was very strictly followed as they attached great importance to the medical profession.

The equipment which these priest- physicians carried with them was a utensil for preparing 'Haoma'. It was a holy plant which had certain healing powers (In Hindu mythology it is defined as soma or Pressed juice). Another article which they carried was a small whip which was used for offences against religious hygiene for exorcising and for driving the demons. They also carried a rod or knife to kill the harmful insects or snakes[21].

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[21]Anonymous, **Theories and Philosophies of Medicine**, Op. cit, pp. 42-47.

CHINESE MEDICINE

The history of formal Chinese medicine properly begins with the legendary period which extended from 2697 to 1122 BC. The Chinese medical literature is very extensive. The beginnings of medicine are credited to three legendary emperors Fu-His, Shen - Nung and Huang- Ti. The Father of Chinese medicine was Emperor Shen Nung, who reigned about 2700 BC. He examined hundreds of herbs and tested 70 different poisons personally. To him is ascribed the 'Pen T'sao' or 'The Herbal', although the style of writing, places it more accurately in about the first century BC. The three - volume work enumerated 365 drugs. They were classified as superior and inferior drugs.

Another eminent physician of the legendary period was Huang Ti [2689-2598 BC.]. He was called the yellow Emperor and to him was attributed Nei Ching or 'Classics of Internal Medicine', the oldest medical book known to man. Most non-Chinese historians believe that it actually was written about 1000 BC and that it drew largely on the teaching of Huang Ti. There have been no major changes in Chinese medicine since this book was written[22].

Basic concepts

The Chinese philosophy which deals with the dual forces of Yin and Yang, light and dark, life and death, male and female states that they are not really separate in man but are in complicated balance. Yin and Yang are in a constant state of flux in

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[22] A. Castiglioni. **A History of Medicine (Translated from Italian),** Op. cit, p.99.

Herbs are being chopped for the preparation of medicines



A chinese medical practitioner preparing a herbal combination in a drug-store



Courtesy: Natural product science, Korea, 2003.

the body; perfect harmony means health; disharmony brings disease. There are 12 main ducts carrying these vital forces, paired bilaterally, symmetrical and usually deeply imbedded in the muscles. The roots are from the little toe to the root of the tongue; from the inside of the little finger, from the hairy spots on the big toes to the vertex of the head. These ducts rise to the surface at 365 points on the body. After a disease was diagnosed, the doctor would use acupuncture at these points to let the evil air out and restore the proper balance of Yin and Yang[23].

Physiology

The Chinese concept of physiology was on less firm ground than that of anatomy. There are four standard methods of diagnosis in the Nei Ching the oldest Chinese medical treatise and they are inspection, auscultation, interrogation and palpation. Inspection means to note the complexion and expression of the face; auscultation is to listen to the voice; interrogation is to enquire into the history and palpation, which is the most important one is to examine the pulse. The theory of the pulse is based on the interactions and the balance of Yin and Yang.

Diagnosis

The diagnosis is based on primarily on observation of the pulse and inspection of the tongue. There are no less than 51 different types of pulses and 37 different shades of tongue described in Chinese medicine. Diagnosis is based primarily on observation of the pulse and inspection of the tongue.

Chinese pulse-lore is highly complicated and constitutes in practice a most detailed procedure requiring in the simplest cases ten minutes and in more difficult ones several hours.

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[23] Y.C. Kong. "Introduction to Basic concepts in Chinese Medicine", **Studies in History of Medicine**, New Delhi. 5(1), 1981. p.4.

Eleven positions are recognized, in which the pulse can be felt. Each of the pulse has its own name. Feeling the pulse is generally carried out upon the radial artery, the method consists in first laying the middle finger on the head of the radius and then adding the index and ring fingers whilst the thumb rests upon the dorsum of the corpus.

Treatment

The treatment methodologies include acupuncture, moxibustion, massage, administration of natural drugs and surgery.

Acupuncture is an ancient therapy in which needles of 3 to 24 cm long are placed in the flesh either manually or with the aid of a light mallet. The physician introduces these needles during inspiration, rotates them and then withdraws at expiration. This depends on the nature of the disease. The system of acupuncture treatment is of Chinese origin and can be traced back to the Stone Age. When stone knifes and other sharp edged tools were invented to meet the demands of every day use. These instruments were also used to relieve pain and disease.

They were known in the ancient China as 'Bian'. In a book written during the Han dynasty (206 BC – 220 AD), 'Shao Wen Jie Zi or 'Analytical Dictionary of Characters', there is a mention about Bian and its use to treat diseases. This is the most ancient record on the description of primitive acupuncture treatment[24].

Another method of treatment still in vogue is 'Moxibustion'. This involves placing small cones of a combustible material on the skin directly over the diseased organ and igniting them. The patient remains immobile until they are completely

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[24]A. Jalil. "Mermas and Acupuncture Points - A comparative study", **Studies in History of Medicine**, New Delhi, 5(1), 1981. p.18.

burnt. A blister and later a scar is formed on the skin. Favourite sites for moxibustion are the abdomen, back and pre-auricular areas of the face.

Massage constitutes a complete system and is carried out with great skill, mostly by the blind or by old women and medical gymnastics. This art is known for centuries in China by the mythical *Tschi-sung tin* about 2500 B.C.

Other aspects of Chinese medicine

The Chinese were fascinated by numbers and they used them as a framework for their body image. The 365 drugs of the PenT'sao and the 365 points of acupuncture correspond to the number of days in a year, while the 12 main vessels for the transport of Yin and Yang are the 12 great rivers of China. Another system was based on the number five, because it corresponded to the five elements of Yin and Yang - wood, fire, earth, water and metal. There are five types of afflictions - dumb, deaf, deformed, lame and dwarfed; five kind of sufferings - birth, senility, illness, death and parting; five flavours, five fluid secretions, five climates and five spiritual resources. The Chinese knowledge on medicine was held back by the concept of the sacredness of the human body which was further strengthened by Confucius in about 500 B.C.

Not until November 13, 1913 the date of the first mandate was known authorizing dissection of the dead bodies and it was the first legal autopsy performed. The occasion was one of the great formalities with judges, governors and officials in attendance. A pamphlet was also printed stating that this was the first dissection in China in 4000 years.

During the Han dynasty, the Chinese physicians tried to push away some of the shrouds of mysticism in which they were so tightly enclosed. Due to the Chinese belief in the sacredness of the human body very little surgery was performed. In the 8th century A.D. well before Jenner discovered vaccination against smallpox, the Chinese were immunizing themselves with the material from mild cases of the disease. It is written that mortality fell from between 30-50 % to 1% after vaccination became prevalent. China's first medical school, the Imperial Medical College was founded in 1076 AD. The 300 students admitted were instructed in medicine, surgery and acupuncture.

The Pharmacopoeia of Chinese medicine is highly developed. It contains as many as 1800 drugs and in recent times such valuable remedies as ephedrine, Chaulmoogra oil and Buffagin which have been taken over from the Chinese medicine by the Westerners and included in their system.

Chinese forensic medicine is of great antiquity and is regulated by an official codex which dates back to the year 1248 A.D. when at the same time Europe boasted of analogous works[25]. It is characteristic of Chinese civilization that a well-organized legal medicine existed as early as in the 13th century A. D.

During the Ming dynasty (1368-1662), there had been a definite decline in the quality of medical practice. During this time the foreign doctors entered China. The first came with the Mongol conquerors in the early 13th century. In the latter part of that century China was visited by a great number of Roman Catholic missionaries the first of many to broaden China's medical horizons.

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[25] M. Neuburger. **History of Medicine**, Op. cit, p.41.

The attempt of the Emperor Kang-Hi (1662-1723) to introduce western anatomy created opposition from the native doctors. From the 19th century onwards reproductions of European anatomical illustrations have been made by Chinese. The first surgeons to reach China in the early part of the 18th century were employed by the East India Company. The first protestant medical missionary to China was Dr. Petter Parker, a surgeon, born in Framingham, Massachusetts, USA and graduate of the Yale medical and theological schools. He did much to bring about the acceptance of western medicine.

In 1853 the first Chinese physician was graduated from a foreign medical school at Edinburgh, U.K. At the turn of the 20th century, many western style medical schools were opened in China. In spite of these influences, many Chinese refused to accept western method believing that the 'medicine of the masters', affords not any real cure[26].

The medicine of Chinese, independent of any recorded external influences, presents the same picture to-day as 1000 years ago, a rare example of the petrifying effect to time. The distinctive civilization developed in harmony with the national type and sprang from peculiar geographical and historical conditions, imparts to Chinese medicine those characteristics likewise to be found in all other departments of Chinese intellectual life. The hallowed edifice of medical learning built by Chinese is an example of a strictly self-contained close system which unites empirical attainments into a harmonious, holistic and from all internal contradictions permeated by a rigid method of thought.

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[26]Anonymous, **Theories and Philosophies of Medicine**, Op. cit, pp.342-346.

It is interesting that the Japanese, who took over Chinese medicines together with Chinese culture in the 19th century A. D. did not show the same conservatism. Nagata Tokuhan, known as the Japanese Hippocrates, played an important part in these developments. Under western influence the Japanese made great progress in surgery in the seventeenth century and in obstetrics and anatomy in the eighteenth century. In the second half of the nineteenth century they were able to assimilate Western medicine as a whole with great ease and skill[27].

China is undoubtedly the youngest among the old civilizations, although recent archaeological findings of early Chinese 'bone cultures' make the traditional Chinese historical data appear more plausible than they seemed a few decades ago. Despite its apparently stable character Chinese civilization has shown a great deal of technological inventions.

TRADITIONAL MEDICINE OF ABORIGINAL AMERICAN INDIANS

The history of aboriginal American Indians deals with hundred of diverse tribes differing in language, customs, social and economic status. The Indian societies were not mere static tribal movements, but cultural diffusion and various other factions were constantly modifying and changing their ways of life. The failure to develop written records and the rapid disintegration of their society after contact with Europeans gives few avenues by which one may re-create their way of life. The first and most obvious of these are the accounts of explorers, travellers and settlers. But

[27]E.H. Ackerknecht. **A Short History of Medicine**, Op. cit, pp.43-46.

they have judged their medical practices in the light of their own medical knowledge since a wide gap existed between the cultural background of the 16^{th} century explorers and those of the 19^{th} century.

The picture of the medicine of American Indians during the past three centuries had suffered considerable distortion as a result of what has been termed 'the cult of the natural man'. The American Indians were described as men of strong health, free of disease, and said to possess a tremendous fund of medicinal herbs. Their medicine was too closely identified with the religion rather than medication.

The medicine man represented a priestly intermediary class whose duties were to ward off evil spirits and summon the good ones. The intimate connection between religion and medicine is shown in the work of Indian etiological concepts by Dr.Robert C. Major[28].

He listed the causes of diseases under three main headings and the first being those diseases caused by a spirit acting independently, the second was the diseases that might be caused by a spirit acting at the behest of a human agent and the third one was the diseases attributed to souls or human spirits. To check the power of the offending spirits and appeasing or combating them, the primary weapons the medicine man had used were the incantation chants, dances, medicine bags, amulets, talismans and other paraphernalia of magic and witch doctors.

Once diagnosis was made the next step was to find a cure. Here again

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[28]R.C. Major. "Aboriginal American Medicine North of Mexico", **Annals of Medical History**, Washington. 10(8), 1938, pp. 540-541.

religious and spiritual procedures were essential although other methods were brought into play. In addition to the incantations, dances and fetishes the practitioners frequently used medicines and techniques of therapeutic value. The art of healing shifted from the spiritual to the physical or pragmatic level increasingly due to the influence of white folk medicine. The practices of the Cherokee Indians are representatives of both the best and worst features of American medicine in general. In preparing herbal remedies, the Cherokee pounded, steeped or boiled the herbs. No attention was paid to the dosage and the patient was expected to drink as much medicine as his stomach would hold. While undergoing treatment from the medical men, the Cherokee like the other American Indians were subject to many taboos and restrictions on diet. Fasting was common although occasionally and it was carried to the point where it defeated its purpose.

Frederick W.Hodge in his 'Handbook of American Indians North of Mexico' credits them with using the following methods of treatment; massage pressure with hands, feet, sash or cord bone-setting, cutting cauterizing, scarifying, cupping, blood-letting, poulticing, clysmata, sweat baths, cauterizing, sucking of snake bites and abscesses, besides vegetable medicines[29].

The American Indians in the Missouri River region used puffballs or praisie mushrooms as a styptic for wounding. Mint, another of the more commonly used herbals in the new world, was used as a carminative by all the tribes in the Missouri River region.

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[29]F. W. Hodge. **Hand book of American Indians North of Mexico**, Bureau of American Ethonology Bulletin-30, Washington, Part I, 42, 1907, pp.836-838.

One of the most widely used herbs among the American Indians of the south east was the Yaupon or cassina. From the leaves and tender shoots of this plant the southern Indians made a decoction generally known as the 'black drink'. Repeated drinks of this beverage induced profuse sweating which was one of the means by which the medical man achieved and they felt that it was spiritual purification.

William Fenton in his excellent study of Iroquois botanicals demonstrated that the American Indians added a considerable number of European plants to their Materia Medica during their years of contact with the Europeans[30]. They were quick to learn the remedies of the whites and to find from them the new uses for their own herbs.

Two medical practices customarily used in conjunction with phlebotomy were vomiting and the sweat baths. To the American Indians the cleansing of the body was a means of achieving spiritual purification, Emesis and sweat baths were an important aspect of their religious ceremonials and the one area in which their medicine had considerable success was in relieving the pains of rheumatism and neuralgia. Amputation was also an important part of their surgery. In glancing back over the American Indians medicine, one fact stands out clearly and it was an inextricable mingling of religion and medicine.

The Aboriginal American Indians were familiar with many herbs and they could provide care for wounds and fractures. They had developed a number of medical techniques and the success of native remedies was due to the real medicinal

[30]W. N. Fenton. **Contacts between Iroquasis Herbalism and Colonial Medicine**, Smithsonian Report for 1941, Washington, 1942. passim.

virtues of the plants used and to the good effects of the techniques like sweat bathing besides perhaps to a greater extent to the power of suggestions[31].

BALINESE TRADITIONAL MEDICINE

Balinese medicine is the hereditary medical practice widely popular in Indonesia. The available literature mainly deals with the diagnosis, treatment methodologies and the drugs used in the treatments. The basic information is written on palm leaves and the scope of the services of the Balinese traditional medicine covers four important aspects of health viz. prevention, cure, rehabilitation and health promotion.

According to Balinese medicine there are two major causes for maintaining good health. They are internal causes and external causes. The former includes seven factors 'Sapta Tamira' [Beauty (*Surupa*), Richness (*Dana*), Cleverness (*Guna*), Nobility (*Kulina*), Youth (*Yawana*), Drink (*Sura*) and Success (*Kasuram*)] which are necessary to keep good health; predominance of any one or more over others, leads to disease; balancing them brings recovery. Apart from these, there are six enemies within known as 'Sad Ripu' [Sex drive (*Kaama*), Greed (*Loba*), Anger (*Kroda*), Upset (*Mona*), Envy (*Matsarya*) and Drunkenness (*Mada*)], which create diseases and hence must be overcome by practicing good behaviour and moral conduct.

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[31]J. Duffy. "Medicine and Medical Practices among Aboriginal American Indians", In: Felix Marti – Ibanez (Ed.), **History of American Medicine**, M.D. Publications Inc., New York, 1958, passim.

The external causes of illness are

i. Transgression of social life.

ii. Conflicts in interpersonal relationship

iii. A special relationship between an individual and the nature

iv. Violations of social and religious rites.

The local traditional healers who practice this system operate within the cultural framework of their society. They follow familiar diagnostic techniques inherited from their elders and used medicines procured from natural sources available locally. The approach is more holistic as compared to modern medicine. The medical system prescribes certain requirements for the practitioners

a. They should possess the basic knowledge before applying to the patients.
b. The healer is the master who should render his services to the needy.
c. Patients are consumers and they should be made to accept the treatment from the practitioner in complete faith.

The healers are trained by their elders not only in medicine but also in related fields so that they get into their profession and exhibit knowledge and ability. The training enables them to diagnose and treat the patients effectively besides prepare the correct medicines in different forms such as powder, syrup, solution, soup etc.

Balinese medicine gives special emphasis on social behaviour and religious rites. Avoidance of these leads to socio-cultural isolation and psychological problems. It also implies to what extent an individual is responsible for his own diseases.

Diagnosis

The diagnosis of a disease is usually made by systematic questioning of the patient and by physical examination. A very important aspect of this system is the dialogue, which is the key to diagnosing the illness, without the patient realizing it. This will give the healer the clues about the reasons for the disease. Thus, the healer plays the dual role of a sociologist as well as the psychologist, a role that is highly valued in modern medicine.

Treatment

The treatment in Balinese medicine is both preventive and curative; they involve the healer and the patient and at times the patient's family and the community as well. Whatever be the form, all treatments are either natural or ritual-oriented. The principle and treatment are based on logical conclusions. The healers are always alert to any changes in the symptoms as well as the patient's psychic condition. The treatment through rituals and psycho-social level is based on some beliefs. A ritual may be integral to the treatment and may have its own therapeutic goal. The specific aim of rituals is to purify or exorcise.

The remedies for the diseases consist of formulations prepared from natural substance such as herbs, minerals and animal products. The traditional pharmaceutical techniques consist of collection of drug materials from natural sources, preservations, preparations and storage.

In short, Balinese medicine is a complete medical system based on holistic concepts of health covering somatic, psychological and social aspects. It is dynamic, evolving in every way to benefit the present day needs. It operates on preventive, curative, rehabilitative and health promotive aspects and is part of Balinese culture and it serves as an object for cultural education[32].

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[32]www.drgrotte.com/Balinesemedicine.shtml.

KOREAN MEDICINE

The Korean peninsula, located between the vast Chinese mainland and Japan has a unique cultural background that goes back to five thousand years. In ancient times, the region was deeply influenced by Chinese culture and traditional medicine in Korea was no exception. The Korean characters, HAN GUL (24 alphabets) was invented in the early 1440s by the Great King Sejang (1397 – 1450) of the Chosan dynasty. But few changes were made to traditional medicines for about 500 years thereafter. At the start of the 20th century missionaries from western countries introduced new concepts and techniques of medicine. During the last century there was an enormous development in modern medical sciences. Even today, however, natural medicine including folk medicine plays an important role in Korean health care.

During the period 1121 B.C – 89 BC, in the very ancient Korea, regional natural products were used together with incantation for the treatment of diseases. For example, people applied lard (pork fat) to the skin to protect themselves from frost bite during winter.

Foreign trade developed during the period 14 B.C – 876 A.D, which introduced strange natural drugs to Korea, mainly from China. Treating diseases continued to be very much dominated by the basic philosophy of "*Yin* and *Yang*", which stated that these natural forces present in the human body must be in good balance and that the "*Five elements*" must be harmonized to maintain good health (*Yin* : represents moon, earth, female, cold, dark, shadow, negative etc., while *Yang*

for sun, heaven, male, hot, bright, light, positive etc ; Five elements are metal, water, wood, fire and earth).

The period 900 – 1400 A.D was considered as the flowering period of Ethno - medicine in Korea. *'Hyang Yak Gu Kup Bang'* is the oldest book of medicine published between 1236 and 1251 A.D. and listed 170 kinds of native domestic herbal medicines.

The properties of these herbal drugs are described in terms of five tastes, which include acidity, bitterness, sweetness, acridity and salinity as well as 'four Ki', which is the energy or the natural passion in the universe. The 'four Ki' includes warm, cool, cold and hot. The volume also documents methods of collection and preparation as well as the toxicity, activities and indications of the natural drugs.

'Hyang Yak Gyp Sung Bang' (85 volumes) was published in 1433. This book has small letters and wood block press printing (xylography) covering about 687 kinds of native herbal medicines. Year's later Japanese scholars hand-copied 30 volumes of this treatise. After the Korean character (HAN GUL) was invented (1397 – 1450), many new inventions naturally followed in day-to-day life. But few changes were made in the traditional medicines for about 500 years thereafter.

During the rule of Chosan dynasty in Korea (1600 – 1900 A.D), the most famous book of Oriental Medicine *'Dang E Bo Gam'* (meaning a 'Treasury of Oriental Medicine') was composed in 23 volumes and published in 1611 by the Royal Doctor Huh Jun (1546 – 1615 A.D). Later on, xylographic of this book was made both in China and Japan.

The herbal medicine market was opened in Dagu in 1658 by the Royal order. Even today, after 350 years of its founding more than 300 kinds of natural drugs are sold every day at this particular market. In 1884 *'Bang Yak Hap Pyun'* (A Compendium of Herbal Drug Recipes) was published by Hwang dynasty (1807 – 1884 A.D). This book is still quite popular among specialists in oriental medicine.

In the period 1886 – 1910 A.D Korea witnessed the dawn of Occidental Medicine and Modern Pharmacy. In 1886, a missionary Dr. Annie J. Ellers opened a gynecological clinic and taught occidental medicine in Seoul. Two years later Dr. Lillias S. Horton joined the clinic. In 1896, the first Korean doctor Dr.Suh Jae Pil received a medical licence from George Washington University. The first pure chemical drug, quinine was advertised for public in newspapers in the same year. In 1897, the first pharmaceutical company, *'Dong Wha'* was established as a manufacturer of digestive drinks. The first graduation from the medical school was in 1902 and the school issued licences to twenty-eight Doctors of Medicine. But the first Modern Pharmacy School was opened in 1910.

In 1910, Korean peninsula was occupied by Japanese army which ruled it till 1945. Shortly after it regained its independence war exploded in 1950 and ended in 1953. As a result, this half century was really chaotic and jeopardous era in the history of Korea.

During the period 1990 – 2003, too much emphasis on Oriental medicine and Oriental traditional pharmacy was given in Korea in addition to modern medicine and pharmacy education. There are eleven colleges of Oriental medicine and three

colleges of Oriental pharmacy in the universities of Korea. The system is influenced by too many political considerations, in the present day Korea[33].

ZULU TRADITIONAL MEDICINE

The Zulus are the natives of South Africa belong to the larger Nguni linguistic group whose origin precedes recorded history. The traditional land of Zulu people is Kwazulu Natal, which has sea, rolling green mountains and natural forests in valleys. The Zulu people have a distinct culture that distinguishes them from other ethnic groups. During each year they hold ceremonies to revive their culture and tradition. Zulu people believe in ancestral worship and traditional healing besides magico – medical customs.

In the Zulu traditional medicine, known as *Umuthi,* witchcraft and exorcism are practiced to a great extent to treat the diseased. For some types of ailments, group therapy in the form of prayers and dancing before the deity are adopted. The witch – doctor '*Isangoma*' has a powerful status and plays a significant role in the society. People believed that the divine healer *Isangoma* possesses supernatural powers having contacts with the ancestral spirits and medicines are prescribed as per their dictates. The medicines are either plant based or animal products. Usually women take up the problem of *Isangoma.*

Over the ages Zulu medicine has changed very little. The practitioners and administrators have various roles today to play in the Zulu society. The Practitioners must acquire their knowledge through apprenticeship and rigorous training. They

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[33]S.R. Chung, S. H. Jeune and M.S. So. "Traditional Medicine in Korea: The Past and the present", **Natural Product Sciences**, Korea. 2003, p. 9, pp. 205-209.

were considered sacred by the people and in the urban areas these practitioners now-a- days set up clinics and sell their medicines. There is also a class of healers known as '*Isanusi*' who possess divine powers and capable of 'smelling out' sorceries and evil – doers.

Diagnosis

The Zulu practitioners adopt three main methods for diagnosis viz. throwing of bones, transmental diagnosis, and perceptive diagnosis. In the first method, the healer throws a set of bones and interrupt through the images and symbols produced by the arrangement of the bones that have been thrown and apply them to the health of the patient. In the transmental diagnosis method, the practitioner goes into a trance to determine what is ailing the patient. This method is simply an altered state of consciousness sought out either by drugs or plants but mostly self – induced and equivalent to autohypnosis. In the perceptive diagnosis technique, the practitioner interprets various vibrations emitted by the patient (almost like an aura) to diagnose the disease. The doctor sits a few feet away from the patient and without exchanging any words he physically perceives the pain experienced by the patient. To explain this phenomenon and perceptive power is beyond rational understanding. It is an inborn gift, which many practitioners have inherited from their ancestors. These powers are called '*Imimoya nayambibi*'. In addition several tribal doctors have developed their own methods of diagnosis and act intuitively.

Treatment

The drugs of Zulu medicine are from natural materials, viz. plants and animals. The plant drugs are used not only to cure the illnesses but also for their psychoactive virtues to keep the evil away and calm down the patients. Among the

animal products, tissues, bones, skin, teeth, horn, fats and viscera are often used. The use of enema and colonic absorption are used to relieve constipation and herbs are used to induce vomiting. For some diseases surgery with medicated preparations are introduced into the openings rapidly and covered with bandages. Likewise external applications of medicated oils and herbal mixture and the use snuff into the nostrils are also in vogue in Zulu medicine[34].

FOLK MEDICINES

Folk medicines are the age-old medical practices confined to some tribes or groups or areas. In many cases there were no written records and the information on treatment methodologies, drugs and other aspects of the practice had been passed on from one generation to another within the same group or family by word of mouth. They have provisions for treatments for cancerous tumours, bone-fractures, poisonous bites, epilepsy, contraception and other common ailments.

These practices are still in vogue among the hill tribe and gypsies and invariably among every ancient race. Interestingly, these people do not have any awareness about the developments taking place in the modern science or allopathic medicine. It is astonishing to note that with very limited knowledge about the outside world and minimum education at their behest, they display a highly developed inherited skill of medical knowledge and exhibit confidence in treating the patients. They avoid interference by outsiders and maintain secrecy.

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[34]www.library.thinkquest.org/27209/Healing.htm and www.ananzi.co.za

In India the folk medicines are popular among the *'Thodas'* of Western ghats, *'Malayalees'* of Kolli hills, *'Gonds'* of Madhya Pradesh and the tribals of Andaman and Nicobar islands. Modern scientists undertake periodical ethno-medical survey on these tribal pockets and record their findings.

It is noteworthy to mention two popular examples of folk medical practices being done for generations to treat specific ailments in Puthur and Hyderabad, both in the state of Andhra Pradesh. In the former, a particular family has mastered the art of bone- setting and rendering treatment for thousands of people over the years. Even today people suffering from bone-fractures from the medically advanced cities such as Chennai, Bangalore, Hyderabad and adjacent areas visit Puthur for fracture treatment. The treatment methodology and the medicines used are kept confidential by the family members.

Likewise, another family in Hyderabad offers '*Fish medicine*' for asthma cure. In this case during a particular day in a year the family people conduct camps in some areas of Hyderabad city. The treatment involves swallowing of a small 'live fish' in which the medicine for asthma is kept. According to a family member who conducts the medical camp, the fish medicine treatment was started in the year 1845 and the service is being carried on for generations. As the family is restrained under an oath administered by a sage, the secret formula of the medicine could not be disclosed[35]. Hundreds of people from various parts of India throng Hyderabad for the fish-medicine, which has the patronage of the state government and many special buses

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[35]**Deccan Chronicle** (Hyderabad), June 7, 2005.

from different points of Hyderabad city are operated for the benefit of patients who visit the city for the treatment. It is understood that the cost of treatment for bone-setting at Puthur is nominal while for the fish – medicine it is free[36].

Likewise in the villages some women are specialists in gynaecology and they attend to child delivery cases. They are known as *'Ayahs' or 'Maruthuvachis'* in Tamil. Most of these women are uneducated but handle the cases in a masterly manner. They also offer pre-natal and post-natal services to the new born and their efficient hands help many complicated cases. In the villages and tribal communities, the information about medical preparations are composed in the form of songs which are easily understood. The following folk song containing treatment for bone-setting[37].

Folk song containing treatment for bone-setting

Kondamida – Veendi *Kokkiraju – kaluvirige* *Danikemi mandu*	This is a dialogue between two girl players. One informs that kokkiraju's leg broken and the other ask for a remedy.
Vepaku – paspu *Velluli gadda* *Nunemma bottu* *Nutokka dara*	The first girl informs that neem leaves, turmeric, garlic bulb pounded with hundred and one drops of oil are to be bandaged over the broken leg for cure.

[36]**Deccan Chronicle** (Hyderabad), June 6, 2005.

[37]S. Vedavathy. "Folklore Medical Practices", **Heritage Healing - A Monthly Journal of Indian Medical Renaissance**, Mumbai. 2 (4/5), 2000. pp. 29-32.

But due to the availability of modern health care and education among the men and women in villages, the tribe of Folk medical practitioners is dwindling fast. Though the modern medical practitioners have some apprehensions over these practices, these local men still practice this medicine with some support of the local people[38]. Their treatments defy the modern scientific theories. With the advancement in the modern medicine and people's leaning towards it, the support for many folk medicines is showing symptoms of decline. As there are no written records, the preservation of these practices is very difficult. The impact of deforestation, urbanization and modernization shift the tribals from their natural habitats and make them to take up entirely different jobs for survival elsewhere.

Further in many tribes, youngsters go out of their society and get modern education thereby creating a break in the chain of learning resulting in the disappearance of folk medical wealth from the country.

ALTERNATIVE MEDICAL SYSTEMS

The advent of 'Allopathic Medicine' or 'Modern Medicine' has brought a paradigm shift in the health-care system all over the world .The rapid growth of allopathic medicine has pushed many local and traditional medical practices into oblivion. The accurate diagnosis, use of scientific instruments and parameters besides quick relief from pain and symptoms made allopathic medicine popular among the people all over the world. Further the large scope for research, open discussions,

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[38]**Deccan Chronicle** (Hyderabad Edition), June 8, 2005.

acceptance and incorporation of new findings paved way for their phenomenal growth. Due to these factors, the traditional medicines of various countries showed decline and some even faced extinction.

As a result of advancements in scientific and technological fronts as well as the changes in the life pattern of individuals, much of the natural wealth got disturbed and destroyed leading to new diseases. The allopathic system alone could not address all these exigencies to the satisfaction of all. Also, the side effects of the allopathic medicine after consumption are very much baffling. The allopathic system came out openly expressing its inability to find cure for many baffling diseases such as cancer and human immuno deficiency virus (HIV). Hence, the support for the local health traditions for some ailments started gaining momentum and even some of them were accepted by the allopathic doctors. These systems are popularly called as 'Alternative Medicines'. In due course of time many new types of treatments also came into the fold of alternative medicines. These medicines enjoy the support of the people widely though not to the extent of allopathic system. Some of the alternative medical practices are discussed here briefly.

HOMOEOPATHY

The Homoeopathic medicine was devised by the German allopathic physician Dr. Christian Frederick Samuel Hahnemann in the late 18th century. Homoeopathic system of medicine is a treatment method by drugs usually prescribed in very minute doses, which if administered to a healthy person would produce symptoms like those of the diseases. Dr. Hahnemann came across an old idea of the efficacy of 'Cinchona bark' in treating intermittent fever due to its tonic effect on the stomach and

conducted experiments on the patient in order to get the truth. He deduced from the experiment that 'Cinchona' was used as a remedy for intermittent fever and it could produce symptoms similar to those of intermittent fever in healthy people.

Basic Concepts.

Homoeopathy is in the service of mankind for almost two centuries. Dr. Samuel Hahnemann, introduced it for the use of humanity through his scholarly work '*Organan of the art of healing*' in the year 1810.The law of '*Similia Similibus Curentur*'(meaning "like cures the like") forms the basis of treatment under the Homoeopathic system of medicine. Homoeopathy is a specialized method of drug therapy employed to cure the sufferings of a person by the administration of drugs which have been experimentally proved to possess the power of producing similar artificial sufferings or symptoms of diseases in healthy human subjects.

Homoeopathy is based on the four cardinal principles of the following four laws.

- The law of Similars.
- The law of Direction of Cure.
- The law of Single Remedy.
- The law of Minimum Dose.

This system assumes that any disease symptom-syndrome is the reaction of the defence mechanism of human body against the disease causing agent. The symptoms are the means through which the body tries to regain its lost balance. According to this medical system, the symptoms- syndrome in diseases is not the disease *per se* but the reaction of the defence mechanism mobilized by the body in order to counteract a morbific influence existing in the body and causing the loss of

balance of the healthy body. Thus, the disequilibrium in the normal functioning of the organs of body implies sickness.

Diagnosis and treatment

The classical approach is to individualise each person although they may be suffering from the same diseases. The practitioner has to have a detailed and long interview to find out specific characteristics of the defence mechanism of each sick person. He has to study the patient's mental, physical and emotional conditions. Such an examination alone gives an understanding of the imbalance and associated complex of symptoms of the sick person.

In Homoeopathy, primary emphasis is on therapeutics. It takes a holistic approach towards the sick individual and treats his disturbances on the physical, emotional and mental levels at the same time. Its aim is to bring back the lost equilibrium of the sick individual on all the three levels by stimulating and strengthening his body's defence mechanism. The remedy for treatment is chosen on the assumption that the patient is extremely sensitive to it and that this remedy can produce the symptomatology of the sick person.

The treatment of Homoeopathy is particularly widely acknowledged in case of chronic diseases. According to Dr. Dewan Harish Chand, former Honorary Homoeopathic Physician to the President of India, 'Homoeopathy has a scientific basis and clinical effectiveness. Medicines are almost always taken by mouth and are not noxious. They could be stored far a long period and most important of all, they

never produce toxic effects. It could therefore ideally fill the role of an alternative medical system'.

Homoeopathy has definite effective treatment for diseases such as diabetes, arthritis, bronchial asthma, epilepsy, skin eruptions, allergic conditions and mental or emotional disorders[39].

Advent of Homoeopathy in India

Homoeopathy was first introduced in India in 1839 by Dr. Honigberger. During his visit to India he cured Maharaja Ranjit singh of Punjab as his native physicians failed to treat him successfully. Some famous statesmen of India such as Iswar Chandra Vidyasagar and Raja Radhakanta Dev Bahadur were also treated by this system of medicine. Homoeopathic treatment is very cheap with no side effects.

Recognition by the Governments

Due to increasing popularity, homoeopathy received official recognition and the union government soon after the Independence made efforts to develop this system in India. A resolution in this connection was passed in the Constituent Assembly in 1948 and later in the Parliament. The setting up of Homoeopathic Enquiry Committee in 1948, the committee by Planning Commission in 1951 and the Homoeopathic Pharmacopoeia Committee in 1962 testify to the fact that it has government's support. As per the recommendations of these Committees, the Government of India has accepted homoeopathy as one of the National system of Medicine and started releasing funds for its development since the second five year plan. Some of the states also made their own contribution to Homoeopathic

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[39]S.K. Alok. **Indian Systems of Medicine and Homoeopathy-National and State profiles**, Ministry of Health and Family Welfare, Government of India, 1988. pp. 71-73.

Education, employment of Homoeopathic practitioners in the health services and by regulating the practice by enacting State Acts. A Homoeopathy Advisory Committee was appointed in 1952 by the Government of India and the recommendations of these committees led to passing of the Homoeopathy Central Council Act in 1973 for recognition of this system of Medicine.

Under Homoeopathy Central Council Act 1973, the government constituted the Central Council of Homoeopathy in 1974 to maintain the Central Register of Homoeopathy and matters connected to it. This act takes care of Homoeopathic education and practices in the country. The Government of India has taken measures to improve quality of education and practice of the system.

Besides the Central government, some State Governments started taking more initiative to introduce it in the health care programmes. The Central Government constituted the Central Council of Indian Medicine and an Advisory Committee for regulating Homoeopathy education and drugs. To maintain and raise the standard of drugs, the Central Pharmacopoeia Laboratory was formed by the Union government at Ghaziabad in Uttar Pradesh. Similarly for improving education and research National Institute of Homoeopathy and a Council for Research in Homoeopathy were formed. The Government has also introduced Homoeopathic wings in 12,000 Primary Health Centres all over India to offer the services to the people. At present a High Level Apex Body has been constituted to advise the Ministry of Health and Family Welfare in the policy making and programme development of Homoeopathic system[40].

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[40]Anonymous, **Indian Systems of Medicine and Homoeopathy**, Ministry of Health and Family Welfare, Government of India, 1988, pp.71-74.

Homoeopathy Education and Research in India

The Central Government has enforced various regulations in homoeopathy education. A degree Course of five and half year duration (B.H.M.S.) and a bridge Course (Graded Degree Course for the Diploma holders) to acquire higher proficiency or degree were introduced in the curriculum. Recently the Government has approved an amendment to Diploma Course Regulation thus abolishing Diploma Course in Homoeopathy[41].

Institutions

There are at present approximately 180 Homeopathic institutions imparting training at Diploma and Degree level as per the above Regulations. The total admission capacity is 12,035 per year. About 50 Universities have established Departments and Faculties of the Homoeopathy Board of studies or committees.

The Central Government during 2001, amended Post Graduate courses (regular) in four more subjects, namely Pediatrics, Homoeopathic Medicine, Psychiatry and Homoeopathic Pharmacy. Thirty-two institutions have been permitted by the Central Council to start Post Graduate Course in Homoeopathy.

The National Institute of Homoeopathy was established on 10th December 1975 in Kolkata as an autonomous organization under the Ministry of Health and Family Welfare, Government of India, as a model institute in Homeopathy in the country.

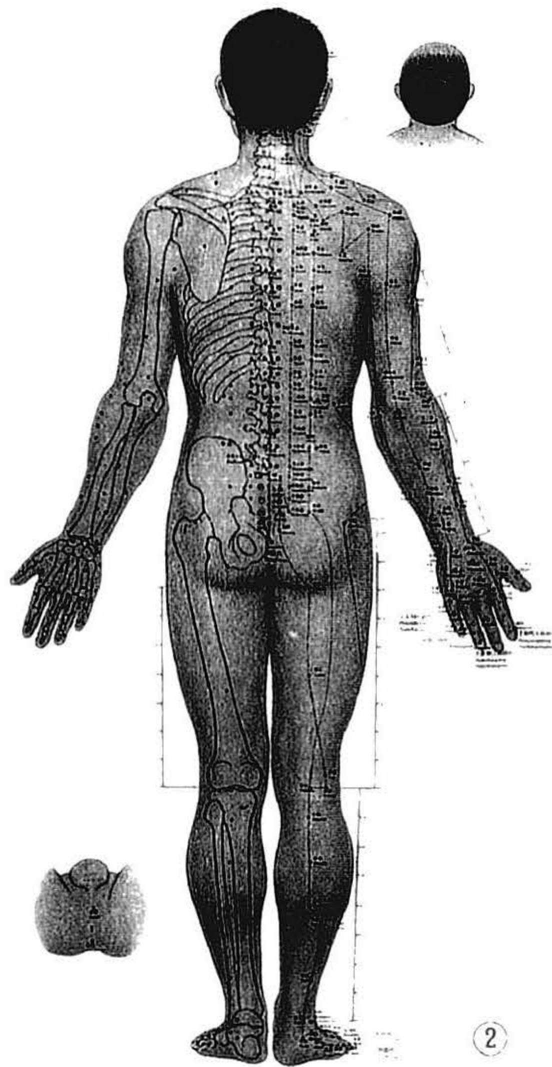
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[41]Anonymous, **An overview of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy in India**, Department of AYUSH, Ministry of Health and Family Welfare, Govt. of India, 2004, pp.55-58.



Acupuncture points and meridiabs (energy channels) situated throughout the body

标准针灸经穴挂图



Courtesy: The Hamyln Encyclopaedia of complimentary Health.
Bradford, N., 1996, Reed International Book Ltd., London.

As on 1.1.2001 the institutionally qualified doctors all over India is 1, 28, 142; the Non Institutionally qualified are 69,110. The number of Hospitals is 307 and the number of beds is 13,694. As far as the institutionally qualified doctors in Homoeopathy are concerned, Maharashtra State tops the list with 25,867 while Nagaland is at bottom with 7. The maximum non-institutionally qualified doctors are 15,176 in Tamil Nadu and the minimum number is in Gujarat (71).

Though there are controversies about the effectiveness of homoeopathic medicines, the system is widely popular in many countries all over the world. The World Health Organization (W.H.O) supports Homoeopathy based on the research publication over the last 40 years, which have shown homoeopathic remedies are superior and equivalent to conventional medicines in the treatment of various ailments in both humans and animals[42].

ACUPUNCTURE

Next to Homoeopathy, Acupuncture is widely popular as an alternative treatment. Though it forms part of a treatment methodology of Chinese medicine, this non-invasive therapy became a system by itself in the long run. The details about acupuncture are presented under Chinese medicine already. There are evidences that a well preserved body of a 5200 years old ice-man on the Austrian-Italian border had several distinct marks coinciding with specific acupuncture points, used for treating a spinal disorder complicated by sciatica (a lumbar discopathy). This discovery questions the hitherto prevailing theory that acupuncture originated in China around

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[42]**The Hindu** (Chennai), Aug. 27, 2005.

Ear acupunture points stimulated using small fine needles



Courtesy: The Hamyln Encyclopaedia of complimentary Health.
Bradford, N., 1996, Reed International Book Ltd., London.

3000 years ago, because it had obviously been practiced in certain areas of Europe (Austria and Italy) even before that. Considering the latest body of archaeological and palaeontological evidences it is quite clear that such European acupuncture techniques could have spread along the spice route from ancient Sri Lanka to Europe and also to the southern Mediterranean regions reaching as far as Egypt and North Africa[43].

Acupuncture is now enjoying renewed popularity as a highly sophisticated and effective form of alternative treatment. Stone acupuncture needles dating from Neolithic period have been found in the tombs of inner Mangolia. The earliest written account of acupuncture appeared in the Nei Jing (The Yellow Emperor's Classic of Internal Medicine), which dates back to 200 B.C. and is the oldest comprehensive medical text book.

MAGNETO THERAPY

Magneto therapy is one of the popular alternative treatments used extensively to relieve pain and sufferings in patients. This technique is based on the principle that 'human body is invested with magnetism and influenced by the external magnetic field.'

The story of magnetism dates back to many centuries before Christ. The earliest mention of the magnet as a healing agent, is mentioned in *Atharvavedaone of the outstanding literary works of India.* The ancient Egyptians were also apparently

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[43]N. Bradford. **The Hamlyn Encyclopedia of Complementary Health**, Reed International Books Limited, London, 1996, pp. 20-22.

familiar with the properties of magnetic forces as they utilized it to preserve mummies. It is said that the pyramids were constructed based on the magnetic properties of earth and so the bodies of the departed rulers of Egypt kept in the pyramids did not undergo any decay for several years. In many civilizations the magical powers of the magnet were understood and utilized as a healing object. People wore magnets as amulets or charms to relieve aches and pains and the healing properties were used unwittingly.

Magneto therapy is very effective in drawing out pain and relieving stiffness when the body comes into contact with magnets. The magnetic waves pass through the tissues and induce secondary currents which produce impacting heats thus reducing pains and swellings. It also revives and promotes the growth of cells and increases the number of healthy red blood corpuscles. Magnets of various shapes, sizes and strengths are used to regulate and strengthen the natural system and preserve the balance of magnetic field in the body.

Treatment can continue even after complete cure to preserve general health. In fact, even normal and healthy people are advised to apply magnets for 10 minutes daily to keep them fit. Magnetized water is also strongly recommended in some ailments which act as a tonic too. Besides water, other liquids such as milk, fruit juices, hair and skin oils can also be magnetized. Magneto therapy has been proved effective especially in rheumatism, migraines, arthritis etc. There are no side effects but nevertheless there are some guidelines to be followed[44].

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[44]www.indiaprofile.com/Ayurveda/magnetotherapy.htm

Besides the above treatments there are more than sixty alternative medical therapies practiced widely all over the world. Some of the popular techniques are explained in the following paragraphs. It is pertinent to mention that most of the alternative therapies are either extension or modifications of the already existing traditional practices.

AURICULAR THERAPY

Auricular therapy is literally the acupuncture treatment on the ear. Paul Nogier was inspired to try it when some of his patients reported that their sciatica had been relieved by a therapist who had cauterized part of their ear lobes. Nogier searched historical medical texts and found references to auricular treatment that dated back to ancient Egyptian times. When he examined his patients' conditions, he found that many of them had tender points on their ears. When he applied needles to these areas that seemed to alleviate the pain in other parts of the body.

SHIATSU

Shiatsu has originated in Japan as a holistic therapy for treating the mind, body and spirit. Shiatsu is the Japanese word which means 'Finger pressure'. It works on body's energy system. Practitioners apply pressure to the points called *tsubo*, on the meridians to stimulate '*ki*' the Japanese word for '*Chi*' or the energy. Diagnosis is similar to the Chinese method. There are several strands in the diagnostic process. Looking (*Bo-shin*), touching (*Setsu-shin*), asking (*Mon-shin*), sense diagnosis (*Bun-shin*) etc. which involves intuition.

ACUPRESSURE

Acupressure is similar to Shiatsu as it involves the method of applying using finger pressure on acupuncture points throughout the body to stimulate the flow of *Chi* through the body's energy channels. Unlike Shiatsu, acupressure involves mostly thumb and fingertip pressure, although it can also incorporate massage along the meridians. In the West, the use of acupressure has been largely over-shadowed by Shiatsu. It is usually incorporated into other therapies such as Shiatsu or Chinese massage and it is used simply for self-help.

CHINESE HERBALISM

It is a part of the ancient system of traditional Chinese medicine which after 5000 years of practice in its homeland has taken the West by storm. It involves using herbs to treat and prevent mental, physical and emotional ill health. Together with acupuncture it forms the bulk of Chinese medical treatment. The patient's general appearance, size, shape and general demeanours, colour of the face and tongue, listening to breathing patterns, speech, cough, asking and touching certain points of the body are the methods followed in this system.

POLARITY THERAPY

It is more accurately called as 'Polarity Therapy Energy Medicine' and is a lesser known branch of Complementary Medicine. In this practice, the opposite energies present in the body are balanced to promote mental, physical and emotional health. It was developed by Dr. Randolph Stone, a qualified Naturopath, Osteopath, Chiropractor and Neuropath who practiced in Chicago. He had interest in Eastern philosophy, mysticism and ancient system of medicine. In 1945 he discovered a book

called 'Mysticism, the Spiritual Path' by Lek Raj Puri. He embarked on a course of spiritual study with the author of the book and the outcome was Polarity Therapy.

OSTEOPATHY

It is a system of whole body healing which dates back to the 19th century. It was devised in 1874 by an American doctor Andrew Taylor Still, the son of a farmer, preacher and a self- styled medical man. It is so well established that many people believe it to be a part of mainstream medicine, a belief compounded in Britain by the passing of the Osteopathy Act in 1993. It was brought to England by a Kirksville student John Martin Littlejohn, who founded the British school of Osteopathy in 1917. Most of the osteopathic practice focuses on easing muscular tension which does more than simply alleviating pain and stiffness.

CRANIAL OSTEOPATHY

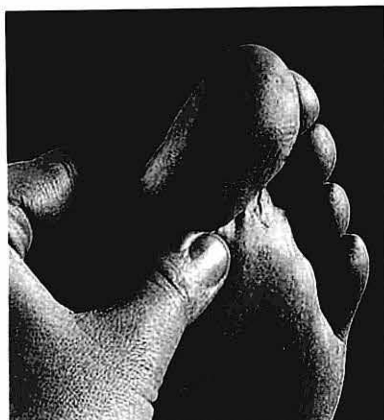
This is a special technique used to manipulate the bones of the skull with a touch. The aim of the treatment is to balance the cerebrospinal fluid and stimulate the body to heal itself.

CHIROPRACTIC

The name derived from the Greek word '*Cheir*' meaning hand and '*Praktikos*' meaning done by. In 1895, a Canadian magnetic healer Daniel David Palmer founded Chiropractic as it is practiced today. It is a therapy which involves treatment on the musculo-skeletal system with particular emphasis on the spine and the nervous system. It can reduce shoulder and lower back pain and help relieve asthma, constipation and digestive problems. The aim of the treatment is to restore the spine to normal function.

Reflexology treatment using thumb and fingers







Courtesy: The Hamyln Encyclopaedia of complimentary Health. Bradford, N., 1996, Reed International Book Ltd., London.

relaxing massage, in steam inhalations, in baths or in diffusers and vapourisers to release calming or invigorating smells into the atmosphere.

The Greeks, Romans, and ancient Egyptians made use of aromatic oils in the treatment. Nearly 6000 years ago the Egyptian physician Imhotep, who became the God of medicine and healing, recommended fragrant oils for bathing and massage.

Hippocrates, the father of Greek medicine, recommended regular aromatherapy baths and scented massage. He used the power of scent in aromatic fumigations to rid Athens of plague. In the later years, in 1930, a French Chemist Rene-Maurice Gattefosse further developed this therapy. Dr. Jean Valnet, a French army surgeon used essential oils as antiseptics during the Second World War.

Aromatherapy was developed as a holistic therapy by Madame Marguerite. She introduced the concept of prescribing oils for the individuals and was the first to combine the effects of essential oils with massage. Around 150 essential oils have been extracted with each having its own unique scent and healing properties.

NUTRITIONAL THERAPY

For years nutrition has formed the backbone of health care. Hunting for food consumed most of the pre-agricultural society's time and energy. Food and herbs were men's first medicine, which were used to treat a large number of conditions ranging from wounds and insect bites, to infection and broken limbs. So no wonder the diet became a fundamental part of the most early health therapies and an integral element of almost all the later medical systems. The use of special diet is to balance the body and to prevent illness.

WESTERN HERBALISM

The tradition of using herbs for healing dates back to ancient times. Their appeal is universal and no single person, country or culture can lay claim to be the first in discovering the therapy. Herbalism also forms part of Western heritage but it has proved equally important in many countries of the world. Herbs and their derivatives have formed the basis of many modern medicines. The curative aspects of numerous plants keep the people healthy and their bodies in a balanced condition. Medical herbalists combine traditional knowledge of herbs and healing with modern scientific developments. The scientists have discovered that herbs contain vitamins, minerals, carbohydrates and trace elements besides healing agents such as tannins, bitters, volatile oils, mucilages, glycerides, saponins, alkaloids etc. The presence of these substances as well as other properties enable herbs to aid the body's fight against the infection, to sedate the over-active organs, relax tense muscles and nerves, improve blood circulation and reduce any inflammation.

BACH FLOWER REMEDIES

It was developed by Dr. Bach to heal and balance negative thoughts that everybody has, as these can lead to physical diseases. There are thirty flower remedies developed by Dr. Bach to support every conceivable personality, attitude and negative state of mind. Bach classified all emotional problems into seven major groups - fear, uncertainty and indecision, insufficient interest in present circumstances, loneliness, oversensitivity, despondency or despair and over care for the welfare of others. Through their subtle vibrational energy, the remedies work to heal every negative

aspect of all seven types of emotional illnesses there by restoring mental harmony and preventing any physical illness.

RELAXATION AND VISUALIZATION

There are two separate stress relieving techniques that are often practiced together. The relaxation techniques help to calm tense muscles and the visualization methods use positive and appealing images to overcome mental and emotional problems. Researches had shown that feelings are linked to posture and if the body is relaxed the mind will follow suit and a relaxed mind produces significant physical benefits. Relaxation and visualization are two separate disciplines often combined to form a single therapy. In other words, relaxation can be considered as a technique to combat stress. But as a therapeutic exercise it is more accurately a state of physical and mental relief, where tensions, fear and anxiety are released and replaced by calm and peaceful feelings. It is a state of peace rather than an activity or form of inactivity.

ALEXANDER TECHNIQUE

This method was developed by Frederick Mathias Alexander who believed that every man, woman and child holds the possibility of physical interests with each other and tries to attain it by personal understanding and efforts. In a strict sense, it is not a therapy as such but a process of re-education, which aims to teach to rediscover our natural praise, grace and freedom and to use our bodies more efficiently. It is often referred to as posture training which is not strictly correct although improved postural balance is often an obvious benefit.

HYPNOTHERAPY

It is a form of psychotherapy that puts patients in a trance-like a state to facilitate healing or change. It can be very effective for treating addictions, phobias, traumas and stress related conditions. The therapeutic use of hypnosis dates back to primitive times when healers used trances to plant suggestions that could stimulate self cure in the minds of the sick.

TAI CHI

It is a general martial art that involves a combination of medication and follow-up exercise to help improve the health of the body and mind .With regular practice it can relieve stress and improve the metabolism and immune system. It is believed that it was found by Taoist monks. The movements are practiced in a slow flowing sequence to encourage harmony among the mind, body and spirit. Like many ancient skills, there are numerous theories about the origin of the *Tai Chi*; one of the most popular is that it was founded by the Taoist monk and martial arts expert, Chang Sen Feng, who lived in the Sung dynasty (960-1279 A.D.). The monk was believed to have been so impressed by the flexibility and natural grace of the snakes' movement that he decided to integrate them into his own special system of martial arts. Tai Chi is more accurately known as Tai Chi Chuan, which means the 'Supreme way of the fist'. The system itself has in time developed and divided into many different styles such as Yang style, Chen style, Lee style and Wa style.

AUTOGENIC TRAINING

This technique involves teaching people a series of special mental exercises to help them relax mentally and physically from day- to-day stress. This calming process

can help to relieve conditions such as asthma, high blood pressure and colitis. Autogenic training was introduced in Berlin in 1920's by a German psychiatrist and neurologist, Dr Johannes H. Schultz. He learnt that people who had been hypnotized quickly learnt how to hypnotize themselves and while in the hypnotic state they were deeply relaxed and free from the psychosomatic disorders that plagued them in everyday life. The term autogenic means produced by self or generated from within and it is different from hypnosis. In hypnosis, the therapist plants suggestions into the subconscious mind while in the autogenic training the individual focuses the attention on certain words or phrases which trigger the relaxation response.

Mastering the technique consists of learning a series of easy mental exercises which switch off the body's stress response. Researches have shown that over eighty physiological changes take place in the body during a single autogenic exercise.

SPIRITUAL HEALING

The channelling of healing energy from its spiritual source to someone who needs it is called spiritual healing. The treatment works on the body, mind and spirit which are seen as one unit that must be in harmony for maintaining good health. This healing technique can help mental and emotional problems apart from a few physical conditions such as frozen shoulders. The healing however does not come from the healer but through him. The word 'Spiritual' refers to the divine nature of the energy which healers agree comes from an external, invisible and intelligent source. The healing energy from these sources is available to all and the healer sees the body, mind and spirit as one inter-dependent unit and believes all three must work in harmony to maintain positive health.

Crystal and gemstone therapy using one or several stones placed on the body



Courtesy: The Hamyln Encyclopaedia of complimentary Health.
Bradford, N., 1996, Reed International Book Ltd., London.

COLOUR THERAPY

Colour therapy uses different colours to treat mental, emotional and physical illnesses and restore the body to normal health and harmony. It is sometimes used in conjunction with other therapies and can help to relieve insomnia, depression and stress-related problems. Colour has such a subtle effect on the lives of people that people rarely give it a second thought and so it is often a surprise to learn that colour can be used as a healing technique. Colour comes from the daylight that contains seven colours of the spectrum viz. violet, indigo, blue, green, yellow, orange and red. It is also a form of radiation like other forms such as x-rays and ultraviolet light which play a part in the healthcare.

CRYSTAL AND GEMSTONE THERAPY

It uses the healing forces in semi-precious and precious stones to correct imbalances in the body's energy fields. It is believed to be effective in reducing stress and to get rid of ailments such as back pain and arthritis. For centuries crystals have been credited with mystical and healing powers. They were used by ancient astrologers, diviners and priests and have been revered for their beauty and power. Buddhist monks carved crystal balls out of quartz which they claimed to be the 'gem of enlightenment'. Like many other therapies crystals work at an energy level.

Therapists believe that our bodies house channels of energy field known as an 'aura'. This energy can be depleted or becomes unbalanced by external or internal influences by thinking negatively, or eating the wrong food or observing radiation from unwanted sources. Crystals and gemstones are believed to exert positive healing energies to rebalance our bodies as they match the energy of the human aura.

CYMATICS

The term Cymatics comes from the Greek word '*Kyma*' meaning 'a great wave'. Cymatic is a form of sound therapy developed by a British medical practitioner and Osteopath Dr. Peter Manners. It is a therapy that uses sound waves operating on the same level as healthy cells, to heal the unbalanced or diseased body. The treatment is painless and can relieve rheumatism, arthritis and back pain. The therapy grew out of early research into electromagnetic energy and the concept that every living thing, human, animal, plant or organism is surrounded by energy field that resonates in its own frequency.

Professor Gauvour of France, Dr. Brauna of Germany, Dr. Harold S. Burr of Yale University and Swiss scientist Dr. Hans Jenny, were all individually involved in the research into the phenomenon in the 1950's. The result of their work was collected by Dr. Manners and developed into the therapy of Cymatics. In fact, the treatment has been proved to be so successful, painless and easy to perform that it is rapidly growing in popularity. There are now Cymatic clinics in Britain, Europe, America, Canada, Japan, Australia, Brazil and Mexico. Cymatic practitioners use special equipments to generate the required frequencies of harmonics to stimulate the affected part of the body. It is applied either by means of a large hand-held applicator directed through electrodes which attach on to the body or via cymatic probes, which are small pencil-like applicators used to treat small areas.

RADIONICS

In 1920, an American neurologist Albert Abrams devised this system of alternative health care known as Radionics. After Abrams death, it was developed by an American Chiropractor Ruth Drown. It was he who discovered that the healing as well as analysis could be carried out at a distance. In 1924, the Royal Society of Medicine commissioned a year long enquiry into the efficacy of radionics. It concluded that Abram's theory appeared to work. Radionics practitioners believe that all persons are surrounded by an energy field. They aim to enhance a person's own healing ability by working with that energy field to re-balance physical, emotional and mental states. This technique is based on quantum physics.

ROLFING

This system of alternative therapy originated in the United States of America in 1930's by Dr. Ida Rolf. She discovered that the net work of connective tissue which encases every muscle could be manipulated to reshape a body that has been pulled out of alignment. She also recognized that gravity has bearing on the shape of the body. The aim of the rolfer is to re-align the body structure, restore its balance and improve the general posture and consequently the person's all-round physical and emotional health.

ART THERAPIES

These therapies are made up of four different performing arts viz. Art, Music, Drama and Dance movements. Each one can help people suffering from psychological problems. Art therapies cure the concerned by finding a language to demonstrate what could not be expressed verbally. All the four therapies work on the

principle that art is cathartic. They can be used to access the unconscious mind in a way that is similar to psychoanalysis which is used for the recalling of dreams.

IRIDOLOGY

This treatment was developed by the Hungarian Doctor Ignatzvon Peczely. It involves examination of the iris of the eye to ascertain the state of the individuals, their health and their tendency to develop a particular disease.

KIRLIAN PHOTOGRAHY

It was developed by a Russian Semayan Kirlian and his wife Valentia in 1939. It is based on the belief that the humans are electrical beings and that human electrical rays can be photographed and analysed. The feet and hands are the parts most commonly photographed.

DIAGNOSTIC THERAPIES

It includes Kinesiology, Iridology and Kirlian photography and is used mainly to find out what is causing the illness. They can help in the cases of digestive problems, predisposition to diseases and identity problems. Kinesiology comes from the Greek word '*Kinesis*' meaning motion and is known as the study of movement. It is a combination of Western technology and the oriental principles of energy flow[45].

Thus, intellectuals in the medical field had greatly contributed to the health of people in the long course of history through the ages. Their great potentials are quite manifest in their discoveries. Mankind survives to this day facing the gravities of all kinds of diseases and resisting the ill effects of health hazards because of the great contributions of these outstanding men to the field of medicine.

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[45]N. Bradford, **The Hamlyn Encyclopaedia of Complementary Health**, Reed International Books Limited, London, 1996. passim.

CHAPTER III

INDIGENOUS MEDICINES OF INDIA

The history of medicine in India can be traced to the remote past. Evidence for the well-organised system of medicine in India can be obtained from the archaeological remains of Harappa and Mohenjadaro. In the Indus valley civilization, a system of medicine prevailed in which drugs of vegetable, animal and mineral origin were used. The seal of Pasupati, the Lord of animals, found in the site, suggests a close link with the tradition in which Rudra is stated to have been the first physician presumably earlier than Aswins, the twin Vedic physicians[1].

The progress of medicine in India can be inferred through different stages from the works of classical authors, compilers and from the account of travellers from abroad. In the 7th century A.D. Hiuen-Tsang who came to India during the period of the Guptas, made elaborate observations on the countryside and has mentioned the names of fruits like *Amla, Madhuka, Bhadra, Kapittha, Macho, Narikela* and *Panasa* which were used for medicinal purposes. Archaeological evidences are available to show that the ancient civilizations made use of different medicinal plants for different purposes. The finding of carbonised seeds of gooseberry at Navdatoli in Madhya Pradesh dating back to 1600 B.C. confirms this. From the earlier travellers from Greece like Megasthenes who was sent by Seleokas as an ambassador to the court of Chandragupta Maurya in 280 B.C. to the recent visitors of South India like Abbey Dubois a Christian missionary in 1800 A.D, almost every traveller has recorded some

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[1]P.V. Sharma. **History of Medicine in India**, Indian National Science Academy, New Delhi, 1992. p.3.

interesting observations on medicinal plant resources supporting thereby the presence of traditional medical practices in India.

It is observed from a work called 'Periplus of the Erethrean Sea'which is supposed to be written in the First century A.D that the traded commodities at Broach port in Gujarat included *Guggulu* (a gum with medicinal value), Pepper, Long pepper and the roots of the herb *Costus*. Marcopolo, who visited South India in 1275 A.D., wrote about the medicinal wealth of plants in the areas he visited. Ibn Batuta from Morocco who visited India in 1342 A.D. during the reign of Mohammed-Bin-Tughlak stated that 'this (India) is the land of pepper'. Frier Odorick, another European traveller who was in Delhi in 1321 A.D. during the period of the Tughlaks observed that the plant *Tulsi* was grown in a pot in the courtyard of the houses and watered daily so as to be plucked whenever needed to treat the respiratory diseases. In 1550 A.D., Garcia de Orta who served as a physician to many European settlers in India observed that aloes a kind of medicinal plants were in cultivation in Bengal[2].

During the period of its glory, many nations of the civilized world of that time were eager to obtain information regarding the healing art from India and the influence of Indian medicine permeated far and wide into several countries such as Egypt, Greece, Rome and Arabia and moulded their medical systems. India was considered by them as a luminous centre of knowledge and immense potential, which attracted philosophers and sages of antiquity to study the science of life. There are evidences in the Greek and Roman medicines about the influence of Indian medicine.

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[2]B.S. Somashekhar. **An ode to the Orient – Historical accounts of healing plants in India**, Amruth, August, 2000, pp.3-6.

Hellenic civilization came most intimately in contact with Indian civilization through the conquest of Alexander the Great.

The Indian system of medicine had been regarded by many western scholars as a rich mine of knowledge from which many useful things could possibly be unearthed. It has been said that the medicine of India was permeated with scientific spirit as evidenced by a desire, observation and experiment by induction and deduction to probe the secrets of nature and to build there a rational system of medicine. On the other hand, contrary opinions were also advanced as no benefit could be derived by a study of the old systems, which are based mainly on empiricism rather than science. This does not seem to be based on a sound logic as a system, which has survived to such an extent the ravages of time and it cannot be entirely brushed aside as unscientific.

Medical practices in India were in the form of folk practices before they were documented to take shape as rational medical systems and had been part and parcel of the culture of the country. The information about theory and practice are mixed up in many documents, be it medical or non-medical. Hence, the study of history of medicine should not be confined to medical texts alone but it must peruse non-medical literature critically. The details referred to in such literature not only indicate their prevalence and popularity but also confirm the same described in medical texts.

For example, three kinds of food according to *triguna* (three characteristics) are not found in any medical texts but are described in the *Bhagavadgita*. The post-mortem examination of the body is found in Kautilya's *Arthashastra* and preservation of dead body in oil-tub in the Ramayana. One can find Aswins' miracles in *Vedas*; Kasyapa's role in the treatment of poisoning, in the *Mahabharata*; Dhanvantri in

Puranas and Jivaka's spectular achievements in *Mahavagga.* From the chapters on *Mahavagga*, one can also acquire knowledge about pharmaceutical preparation, bandaging etc. as prescribed in Buddhist tradition[3].

Thus, many ancient literary works of India, and other archaeological evidences reveal that ancient Indians had a good knowledge on curative medicines which they extracted from various herbs and medicinal plants. This knowledge on medicines had grown in course of time leading to greater development and application of the Ayurveda and Siddha systems of medicine in this land.

AYURVEDA

The term 'Ayurveda' means the 'Science of Life' (Ayur means Life and Veda means Science). It is said to have a divinely origin with Lord *Brahma* as the initiator. He taught this holy science to *Daksha* who in turn passed on to *Ashwini Kumars*, the twins. They handed over Ayurveda to Lord *Indra* who called the sages *Agnivesa, Harita, Bheda, Susruta, Karala* and *Mandavya* and preached the details of this science. There are different versions of the origin of Ayurveda in various texts[4]. According to another school of thought, after *Indra* it was *Dhanvantri* who took the mantle and he is considered the God of health[5].

Ayurveda, in a strict sense, is a science which tells how to lead a pure and

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[3]P.V. Sharma. **History of Medicine in India - From Antiquity to 1000 A.D.**, Indian National Science Academy, New Delhi, 1992, p. ix.

[4]**Vagbhatta's Ashtanga Samgraha, Sutra Sthana**, Vol. I, 6th Edition, Translated by Srikanta Murthy, Chowkamba Publications, Varanasi, 2002, p.3.

[5]H. Eduljee. **Op. Cit.**, p.70.



Charaka (Redactor of Charaka Samhita)
Each and everything of universe, if duly processed and applied in proper way bears therapeutic value.

healthy life free from all sorts of diseases and sufferings. Most of the approaches of Ayurveda deal with the prevention of ills including diseases during entire life in its various phases. Besides, the science also explains the principles of maintenance of health and it has also developed a wide range of therapeutic measures to cure illnesses. These principles of health promotive aspects relate to physical, mental and spiritual welfare of human beings. Thus, Ayurveda becomes one of the oldest systems of medicine dealing with both preventive and curative aspects of life in a most comprehensive way.

The founders of Ayurveda had much more than a mere skill of treatment or diagnosis of a disease condition. It meant for them the total concept of life which includes both man and his environment. According to them the well-being of a man which is the aggregate of body, mind and soul cannot be confined to mere physical health but extends to the total sense of enjoyment of physical, mental and spiritual satisfaction and enrichment, born out of wholesome and mutually beneficial interaction between the individual and his environment, society and spirituality. Such well-being alone is real and true of man in his entirety and is the object of the "Science of Life".

Charaka declares therefore[6]

> *"That is named the science of life wherein are laid down the good and the bad life; the happy and the unhappy life and what is wholesome and what is unwholesome in relation to life, as also the measure of life".*

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[6]**The Caraka Samhita,** Vol.I, Shree Gulabkunverba Ayurvedic Society, Jamnagar, 1949, p. 526.



Sushrutra - Father of Surgery - Performing Plastic Surgery of Ear for a multilated patient. The Susruta-samhita, ancient Indian text on surgery, describes this and other procedures, as well as ancient instruments.

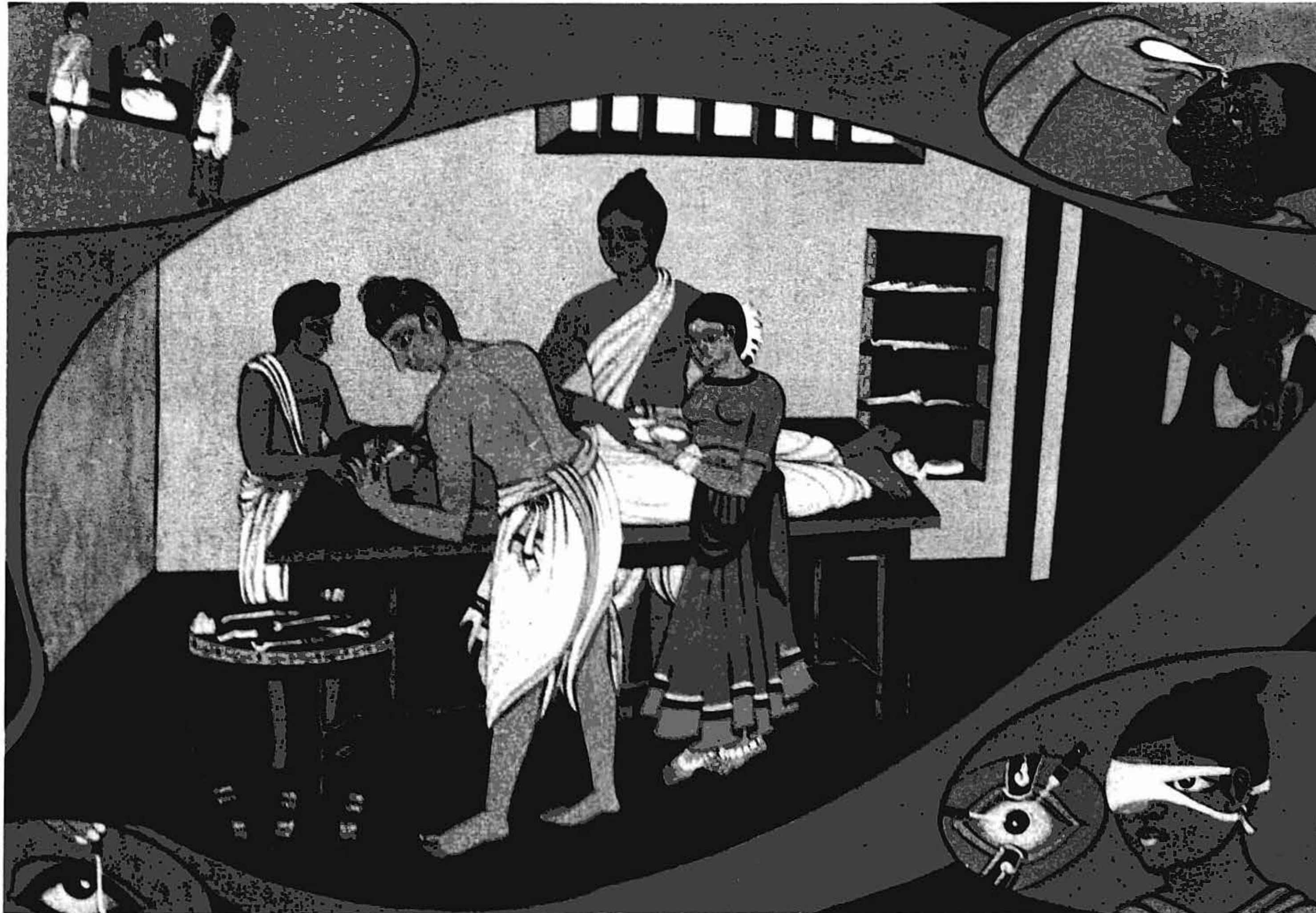
Ayurveda is said to have started its development around 1500 B.C. *Atharva –veda*, one the four most ancient books of Indian knowledge contains 114 hymns dealing with health. Ayurveda has originated only from these hymns and hence it is considered to have divine origin. By systematic and careful observation with experience over the past a few thousand years it has grown into a very comprehensive health care system. Ayurveda has two major schools and eight specialisations. The school of physicians is known as '*Atreya Sampradaya*' and the school of surgeons is referred to as '*Dhanvantri Sampradaya*'.

The most important and massive ancient compilation of the school of medicine is known as '*Charaka Samhita*'. It contains several chapters dealing at length with therapeutics. About 600 drugs of herbal, mineral and animal origin are described in it. In addition, this compendium also deals with other branches of Ayurveda such as anatomy, physiology, etiology, diagnosis, pathology,treatment and medicine. *Charaka*, who was also known as *Agnivesha*, was more precise in his classification approximating to the more modern European method. He was far broader than his successors in his entire views[7].

An equally exhaustive ancient compilation '*Sushruta Samhita'* relates to the school of surgery. It deals primarily with fundamental principles and theory of surgery. More than 100 kinds of surgical instruments are described along with their uses in this valuable document. Dissection and operative procedures are explained by making use of vegetables and dead animals. Descriptions of procedures for incision, excision, extraction and bandaging are detailed in the compendium. In addition, this

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[7]A. Wilder. **History of Medicine**, New England Electric Publication Company, USA, pp. 25-28.



Performing Cataract Surgery by Sushrutra's technique. For mature cataract, removal of opaque material of lens was advised by Sushruta. The same is practiced today by surgeons.
Sushruta U.T. - 17/55

document also mentions other topics such as anatomy, embryology, toxicology and therapeutics besides a mention about 650 drugs. The commentary on the works of *Sushruta* explains lithotomy, abdominal sections, hysterectomy as well as various plastic surgeries giving very precise dissections in regard to the proper mode of performing them. *Sushruta* was the first Indian author to make a classification of drugs and remedies and to construct a scientific terminology.

With the progress in time, Ayurveda has grown into a fully developed medical science with eight branches, which have parallels in modern medicine. The growth of these eight specialities gave Ayurveda another name '*Ashtanga Ayurveda*[8]'.

The eight branches are:

1. *Kayachikitsa* (Internal Medicine)
2. *Kaumarabhritya* (Paediatrics)
3. *Graha Chikitsa* (Pyschiatry)
4. *Salakyatantra* (Optholmology)
5. *Salyatantra* (Surgery)
6. *Visatantra* (Toxicology)
7. *Rasayanatantra* (Geriatrics)
8. *Vajikaranatantra* (Knowledge of sexual function)

Thus, Ayurveda has become an earliest medical science, which proclaimed that normal health can be achieved through a blend of physical, mental, social, moral and spiritual welfare. According to Ayurveda, health is considered as "a pre-requisite for achieving the supreme ends of life consisting of righteousness, wealth, artistic values and spiritual freedom". Preventive and curative aspects of diseases are considered as important components of normal health.

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[8]A.W. Thomas. **Review of the History of Medicine**, Adam Black & Co., Edinburg. 1867. pp. 16-18.

Ayurveda deals elaborately with measures of healthy living during the entire life span and in its various phases. Apart from dealing with the principles for maintenance of health, it has also developed a wide range of therapeutic measures to cure illness.

Concepts and Principles

Ayurveda is based on certain basic principles of physical, chemical and biological sciences. In addition, it gives special consideration to spiritual aspects of life in the understanding and treatment of human diseases. There are four key concepts in Ayurveda viz. *Panchamahabhutas, Tridoshas, Dhatus* and *Mala* which in combination guide the Preventive, Promotive and Curative aspects of health.

Panchamahabhutas

Panchamahabhuta theory explains the five basic elements- Air, Water, Fire, Earth and Sky as responsible for the formation of the universe and creation of all forms of life in the world including man.

Tridoshas

The three constituents of '*Tridosha*' are *Vata, Pitta* and *Kapha*. *Kapha* deals with the cellular and intra-cellular structure of human body and is responsible for its support and stability of the body while *Pitta* refers to the energy concerned with the metabolic and biochemical processes that generate heat and energy within the body. *Vata* is the force which regulates the proper use of energy by different cellular structures of the body.

The concepts of *Panchanahabhutas* and *Tridoshas* together explain all the physiological processes taking place in the living body. That is, they directly relate to pathogenesis of diseases and their symptoms.

Dhatus

These are the essential materials present in the vital organs of the body. The seven *dhatus* are[9]:

1. *Rasa* (Body fluids)
2. *Rakta* (Blood)
3. *Mamsa* (Muscular tissue)
4. *Asthi* (Bone tissue)
5. *Medha* (Adipose tissue)
6. *Majja* (Bone marrow)
7. *Shukla* (Generative tissue including Sperm and Ovum)

Mala

Mala denotes the waste products of the body. The food consumed by the body is responsible for bringing the above mentioned seven *dhatus* into existence and building them further. During this metabolic process each organ produces a specific waste or *Mala* such as stool, urine, sweat, nails, hair etc.

According to Ayurveda, a balanced state of all the *dhoshas*, *dhatus* and *mala* represent a healthy person. It further emphasises that the health of a person not only

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[9]S. K. Alok. **Indian Systems of Medicine and Homoeopathy, National and State profile**, Ministry of Health and Family Welfare, Govt. of India. 1988. pp.35-36.

depends on the balanced state of the above factors but also on his relationship of his totality with the outside world or the universe. For normal health, Ayurveda advocates a detailed daily and seasonal pattern of life activities with emphasis on regulated diet, good sleep and satisfactory sexual performance.

Also Ayurveda gives importance for mental health. The mental forces are *Satva, Rajas* and *Tamas*. Predominance of *Satva* gives a man pure and clean thoughts and ideas while *Rajas* domination implies the person is full of activity and energy. *Tamas* helps to bring equilibrium of the above two forces as the loss of equilibrium will lead to mental illness.

Diseases can also be due to the type of food one takes, habits and non-observance of the rules indicated in Ayurveda for healthy living. Further, seasonal changes, lack of exercise, improper application of sense organs, incompatible actions of the body and mind can also result in disturbance leading to diseases. Hence, the treatment should be in such a way as to restore the balance by regulating the diet, life routine and administration of proper drugs.

Diagnosis and Treatment

The primary causes of the diseases are:

1. Poor nutrition
2. Accumulation of wastes in the body
3. Disturbance to the circulating fluid
4. Malfunctioning of the vital organs due to the above or any other external reasons[10].

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[10]ibid. pp.37-38.

Once the disease sets in, therapy should be resorted to. In Ayurveda, the diagnosis involves consideration of human body as a whole. For this, a detailed knowledge about the physical, physiological and mental state of the patient is gathered and systematically recorded. The patient's temperament, habits, diet, living conditions and details about the disease are studied. Thus, the diagnostic process mainly involves two aspects viz. examination of the patient and investigation of the disease.

Examination of the patient involves one or more of the following. The investigations help the practitioners to diagnose the disease accurately. Pulse examination is done to find out which of the three *'doshas'* got affected and also to find out the causes of the disease. Investigation of urine, feces, eyes, tongue, examination through auscultation, and tactile stimulation of various parts of the body are also done to confirm the disease.

The second type of examination relates to the causative factors and the details of the pathological as well as clinical conditions for determining the treatment. Treatment of the disease generally consists in avoiding causative factors. Administration of suitable medicines and proper diet are recommended for restoring the balance and strengthening the body mechanism. While treating the disease the whole body is taken into account for a thorough investigation and hence it is said that Ayurvedic treatment is done on the basis 'holistic approach'.

The treatment involves administration of drugs procured from natural sources such as herbs. In Ayurveda the use of herbs is more and they are used in different forms based on the preparation techniques. The drugs in Ayurveda include, besides single herbs, compound preparations such as *Churnam* (dry powder), *Lehyam* (sugar-based preparation), *Ghritam* (ghee-based preparation), *Gutika* (pills), *Lepa* (Paste



Lord Buddha treating the sick.
Friendly behaviour and affection towards the patient are essential qualities of a physician.
Charaka Sutra - 9/26

form), *Panakam* (jaggery based preparation), *Tailam* (Oil based preparation), *Bhasma* (ash form),and *Sindura* (mercury based). Two preparations *Asavam* and *Arishtam* are unique to Ayurvedic system of medicine. They are prepared using herbs which when processed in wooden containers generate alcohol in small quantities and preserve the finished products without affecting their efficacy for a fairly long time[11].

Important treatises of Ayurveda

Charaka Samhita, Susruta Samhita and Bhavaprakasa Nighantu are the three treatises considered to be important in Ayurveda. The book written by the disciples of the sage Kashyapa is known as '*Kashyapa Samhita*' is the source of paediatrics. During the 2nd century A.D. Logabattar wrote '*Ashtanga Hrithayam*' and '*Ashtanga Saṅgiraharm*'. These, in addition to '*Sarangadhara Samhita*' are widely respected in South India as sources of reference. All these ancient texts besides *Upanishads*, *Puranas*, *Ramayana*, *Mahabharata*, *Thirukural*, Buddhist and Jain religious books contain many details about this ancient system of medicine. Many Ayurvedic books have also been written in different Indian languages. Several important Ayurvedic books were translated into Persian, Arabic, Chinese and Tibetan languages.

The study of Ayurvedic medicine was confined to men of Brahmanic rank. A student of medicine had to pass an examination with regard to his knowledge he has acquired from the teachings of his preceptor. Also, he should possess the necessary aptitude towards, the medical profession. It is by this the students are tested. The final examinations were very severe, enabling only a small numbers to pass them

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[11]**The Therapeutic Index**, The Indian Medical Practitioners' Co-operative Pharmacy and Stores Limited, Madras, 1983. pp. 4 -7.



Brain surgery on king Bhoja by Jeevaka - a famous Neuro Surgeon and personal physician to Lord Buddha

successfully. Surgery evidently attained a high degree of perfection. The Indian practitioners in this respect were far superior to the Egyptians[12].

Institutions of Ayurveda in India

Ayurvedic education in India has progressed over the years. The education and training in Ayurveda are monitored by the Central Council for Indian Medicine (CCIM), which is a statutory body set up by an Act of Parliament known as Indian Medicine Central Council (IMCC) Act, 1970. There are 209 Colleges including 156 run by private managements. These are affiliated to the Universities in their area and most of them conduct degree courses leading to the award of Bachelor of Ayurvedic Medicine and Surgery (B.A.M.S.).There are thirty three Colleges conducting Post-graduate courses (M.D.). Maharashtra leads the list with 54 Ayurveda Colleges of which 5 are run by the State government. The Government of India started the National Institute of Ayurveda in Jaipur (Rajasthan) in 1976 as the successor of the Ayurvedic department set up in 1865 for the education of Ayurveda in the famous Maharaja Sanskrit College followed by a Government Ayurvedic College at Jaipur. The Gujarat Ayurvedic University at Jamnagar in Gujarat State was started in the year 1956 and it is serving the cause of Ayurvedic science all over the world. The University conducts Under-graduate, and Post-Graduate courses in various specialisations and Research courses leading to Ph.D. degree in Ayurveda. For the benefit of foreigners, short term courses on various aspects of Ayurveda are also conducted[13].

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[12]**The Charaka Samhita**, Vol. I. Shree Gulabkunverba Ayurvedic Society, Jam nagar, New Delhi. 1949. p.428.

[13]www.indianmedicine.nic.in

Pandit Madan Mohan Malaviya, a renowned freedom fighter and nationalist founded the Ayurveda College in Banaras Hindu University, at Varanasi, Uttar Pradesh in the year 1927. Since its inception this institution had been contributing a lot to the development of Ayurveda in India and abroad. The college presently functions under the Institute of Medical Sciences and conducts Under-graduate, Post-Graduate and Research Courses in various disciplines of Ayurveda.

Important Hindu deities and sages associated with Ayurveda

Brahma. He is the first member of the Hindu triad of Gods and propounder of the healing art Ayurveda. He is also described as the embodiment of all sciences and possessor of healing medicines. In *Yajurveda*, He is referred to as 'the first divine physician who drives away all diseases'.

Siva. In the *Puranaas*, Lord Siva is considered to be the first propounder of the science of medicine. In the later treatises, he is often quoted as the authority on medical subjects. A comprehensive work on medicine called '*Ayurgrantha*' or the 'Book of Life' ascribed to Him and He is said to have composed the work in the *Treta yuga* .The name Siva does not occur in the Rig Veda, but Rudra is mentioned by name there in connection with medical topics. He is worshiped as the kindly God who cures diseases and from Him Manu got wealth and health. From such a prototype legends comes the healing God Siva in later literature.

Bhaskara. He is the Sun God who in the *Rig Veda* is called by two different names, *Surya* and *Savitri*. Bhaskara is also considered as the fountain-head of all knowledge in medicine. The idea that the Sun is a good physician can be traced back to the *Rig Veda* where he was invoked for curing diseases.



Punarvasu Atreya Original Expounder of Agnivesh Tantra (Charaka Samhita).
Acharaya Punarvasu preaches Ayurveda to his disciples.
Chakra Sutra - 1/30

Aswini Kumars: *Rig Veda* describes the Aswins as the twin sons of *Vivasvat* and *Saranyu*. They are also called as the sons of sky or the off-spring of the ocean.

Kasyapa: He was an ancient physician who was present in the meeting of the sages mentioned in Charaka.

Dhanvantri: He was a physician of Gods in heaven. In *Susruta Samhita*, he is referred to as the teacher of *Salyatantra* (Surgery) who imparted this knowledge to Susrutha.

Agastya: In Rig Veda, Agastya appears as the author of several hymns and is said to be the son of Mitra and Varuna. He is venerated in the South as the first teacher of science and literature to the primitive Dravidian tribes. He is said to be instrumental in introducing Hindu religion and literature in the Peninsula.

Bharadwaja: He was a Vedic sage and composer of hymns. According to *Charaka Samhita*, Bharadwaja was selected by the Rishis to receive training under Indira and to learn the science of life.

Visvamitra: He was an ancient physician who with other Rishis learnt the science of medicine from Bharadwaja. He was popular among the saints during Vedic times.

Sanathkumar: He was another saga who Composed '*Sanathkumara Samhita*' which deals with treatment of eye-diseases.

Atri: He was one of the seven sages and he is said to be one of the sons of Lord Brahma. He wrote '*Atri Samhita*' a treatise on medicine and is well known in Punjab which is said to be as old as '*Charaka Samhita*'.

Atreya Punarvasu: He was the son of sage Atri and the speaker in the *Agnivesa Tantra*, edited by Charaka. He learned the science of medicine from Indira

and he composed several works bearing his name among which is the book called '*Atreya Samhita*' in 5 parts containing totally 46,500 verses.. His six disciples were Agnivesa, Bhela, Jatukarna, Parasara, Ksarapani and Harita, all of whom distinguished themselves as authors of medical works.

Krisna Atreya: In the medical literature of the Hindus, there are references to four different Atreyas - Punarvasu Atreya, Krisna Atreya, Dattatreya and Biksu Atreya. Biksu Atreya was the reputed teacher of Jivaka, the famous physician of Buddha. He is said to belong to the school of surgery.

***Dattatreya*:** He was the Son of Maharishi Atri and Anasuya. He taught Prahalada, the pious Danava Prince, the science of *Atma Vidya* or knowledge of soul.

***Kankayana*:** He was an ancient physician, who is referred in the *Charaka Samhita* as the foremost among the *Vaidyas(medical practitioners).* He was of the opinion that the tastes were innumerable and that they could only be described according to their seat, quantity and mode of action.

Kumarasiva Bharadwaja: He was different from Rishi Bharadwaja. He was selected by the conclave of physicians to learn the science and art of medicine from Indira. He was the disciple of Atreya Punarvasu.

***Kanada*:** He was a famous sage, who propounded the *Vaisesiki system* of philosophy, and he is said to have written a treatise on pulse consisting of 63 stanzas. It is known as *Nadi Vijnana*. He is said to have written a more comprehensive work - *Kanada Samhita*- a treatise on pathology and medicine, of which the chapter on pulse the *Nadi Vijnana* only is available[14].

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[14]Girindranath Mukhopadhyaya. **History of Indian medicine**, Vol. I. University of Calcutta. 1923. pp. 123-126.

Charaka. He is the author of the most ancient and fundamental book on medicine '*Charaka Samhita*' which is considered to be the oldest repository of human knowledge. His early name was *Agnivesa* which was later changed as *Charaka*, meaning intelligent. The early Arabic writers on medicine refer *Charaka* as the authority and a complete translation of his work was made in Arabic. From the 4th century after Christ, till the present day many scholars, commentators, translators and institutions have added to the sagacity and authority of *Charaka's* name.

Commentators *Bhattara Haricandra* and *Jejjata* named their commentaries after *Charaka* respectively as *Charaka-Vyakhya* and *Charaka-Nyaya*. In the 7th century A. D., the great Sanskrit prose writer *Bana Bhatta* mentions *Charaka* in one of his passages and commends his work.

During the 7th, 8th and 9th centuries A.D., when the Arabic scholarship was at its highest and Islam spread in the West and till it reached the shores of the Atlantic, *Charaka* was the revered authority in the Saracern and Latin world of science and scholarship. Alberuni the mediaeval historian says "they (the Hindus) have a book called by the name of its author *Charaka*, which they consider as the best of their whole literature on medicine". According to their belief, *Charaka* was a *Rishi* in the last *Dwapara Yuga*[15].

[15]**The Charaka Samhita**, Vol. I, Shree Gulabkunverba Ayurvedic Society, Jam Nagar, 1949, p. 78.

SIDDHA

The Tamils inhabiting the Southern peninsula of India had a hoary past as ancient as that of the Egyptians. They undertook a systematic study of nature and its elements and have developed a highly systematised medical science known as "Siddha". The science is well founded on the basic principles of nature and its elements after a careful and thorough study of the human system[16].

The history of medicine can be reconstructed only on the basis of relevant source materials. The ancient period is lit by archaeological evidences either monumental or surface or excavated materials. But the history of medicine of Tamil Nadu is primitive and it is of pre-historic period. Hence, no direct relevant sources either archaeological or monumental are available for this field of study. However, some of the medical practices of the tribals of the present day reflect the ancient systems. Hence, from their practices, it may be possible to build up the development of ancient medical system to some extent[17].

Primitive men believed that evil spirits or supernatural forces were main factors responsible for all diseases and mother nature possessed remedies for them. So the medical men or the witch doctors constituted the earliest professional class in the evolution of the society. It is a form of faith cure, which was practiced in the *Sangam*

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[16]A. Shanmugavelan. **Siddhars Science of Longevity and Kalpa Medicine of India**, Directorate of Indian Medicine and Homoeopathy, Madras, 1992, p.1.

[17]C.K. Sampath. "Evolution and development of Siddha medicine", in Subramanian, S.V. and Madhavan, V. R., (Eds.). **Heritage of Tamils Siddha Medicine**, International Institute of Tamil Studies, Madras, 1983, p.1.

age and even to day it is in vogue among the hill tribes and also in the remote villages of Tamil Nadu.

The culture and tradition of the Tamils can be traced to the Indus Valley civilization which is supposed to have spread from the Tamil country or vice-versa before 2500 B.C. It was noted by Hiradatus in his jottings[18] and also endorsed by another historian C. F. Fabri who states that it was solely of Tamil civilization which has spread and developed from 'Thamilagam'[19].

Origin of Siddha Science

There are three theories regarding the origins of Siddha Medical Science. They are:

i) Lemurian Continental origin

ii) Mediterranean origin

iii) South Indian origin

Lemurian Continental origin

This is based on the faith in the commentaries to the Tamil literary works such as *Tholkaappiyam, Iraiyanar Kalaviyal* and *Silappadikaaram*. It is in the *Kumari-k-kandam* popularly known as the *Lemurian continent, which* was the cradle of mankind, now lost in the Indian Ocean due to several deluges, the science of healing should also have been born with the beginning and evolution of humanity. The authenticity of this

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[18]V.L. Raghavan. **Hiradatus**, First Edition, Manivasaka Pathipakam, Chidambaram, 1945, p.45.

[19]Michel Sami Udaiyar, A.L., **Pandai Thamilarum Palnattu Arignarum**, (Tamil) First Edition, St. Joseph's College, Tiruchy, 1937, p.26.

claim is still under examination. Soviet, American, British and French explorations in the Indian Ocean have revealed the existence of the Lemurian continent.

Mediterranean origin

Some scholars have put forward a theory that the Dravidians belong to the Mediterranean stock. They moved into India through land route and due to Aryan migration and pressure, they were pushed southwards. With the settlement of Tamils in Tamil Nadu, the metallurgy was introduced and the Siddha medical science was born[20]. The Soviet Dravidologist Dr. M. Andronov considered that Central Asia was the origin of the Tamils. Ethnographers also pointed out similarities between the Mediterranean stock and the Indus people and the Tamils[21].

South Indian origin

There are many Tamil scholars who consider the present Tamil Nadu the homeland of the Tamils as the place of origin of the Siddha Medical science. They also strongly believe that it is the medical science of the Tamils. These theories show the greater zones of areas in which the greatest medical system known as the Siddha medical science was in vogue. Dr. Alexie, a medical scientist and a Nobel Laureate praises the Tamil Siddha Medical science as the most advanced system of medicine in his world-renowned work 'Man, the unknown'[22].

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[20]L. Kameswaran. **A Study of references to medicine in literature in Tamil Nadu**, Proceedings of the Second International Conference - Seminar of Tamil studies, Madras, 1968. p.38.

[21]Subramanian Malayandi. "Epigraphical and Rock-Shelter cane painting evidences for the Siddha Medical Studies during the pre-historic & Proto Historic periods", in S.V. Subramanian and V.R. Madhavan. (Eds.) **'Heritage of the Tamils Siddha Medicine'**, International Institute of Tamil Studies, Madras, 1983, p.23-24.

[22] ibid p. 25.

Pandit Jawaharlal Nehru in his book "The Discovery of India" mentions that the Aryan migrations were supposed to have taken place about a thousand years after the Indus valley period and the first great cultural synthesis and fusion took place between the incoming Aryans and the already existing Dravidians, who probably were the representatives of the Indus valley civilizations. He also sums up that 'It is quite possible and even probable that the culture (Mohenjadaro) was indigenous culture and its roots and off- shoots may be found even in Southern India and that some scholars find an essential similarity between these people and the Dravidian races and culture of South India'[23].

The people of Mohenjadaro had their own notions about doctrines of monotheism, karma, rebirth, asceticism, yoga etc. As far as religion was concerned, the people of Harappa and Mohenjadaro belonged to the culture of *Saivism* and *Saktism*, the two schools of Tantra metaphysics and also they preached various aspects of *'Tantra Sadhana'*. They worshipped mother goddess, the prototype of Siva, the aniconic symbol of phallus, the swastika, their anthropic figures, trees and the spirit and certain animal chimeras of various symbols. In the vedic period more religious activities and rituals were introduced. The religious works of this period explain various rituals and practices. The tantras contain the essential ingredients of Vedic sacrifices, the monotheistic philosophy of the Upanishads, the bakthi religion of puranas, the yogic methods of Panthanjali and mantra aspect of *Atharvana veda*.

Apart from the religious aspects, there were also evidences about the medical practices among the Indus valley people. The finds of stag's horn and antlers, cuttle

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[23]Shanmugavelan, **'Siddhars' science of longevity and Kalpa medicine of India'**, Department of Indian System of Medicine and Homoeopathy, Madras, 1992, p.4.

bone and silajit raised the presumption that the ingredients formed part of the physician's routine practice. It may be presumed that gem of the Siddha system of medicine was formed during that period itself. It is also noticed that the intellectual class of people like physicians and astrologers inhabited the cities. The scholars of history of medicines are of the opinion that medicinal beliefs which are not in the *Atharvana veda* were most probably derived from some medical texts which might have been lost by passage of time. However, these beliefs were persisting from the time of *Atharvana veda*.

Also, spells and incantations continued along with notions of witchcraft which were prevailing among the lower class people referred to as *Dasus* and *Dayas* who were to be identified with the people of Indus valley civilization.

Ayurveda was not mentioned in the Brahmanas and Upanishads which were assigned in the period of 800-600 B.C. Only Charaka and Sushruta mentioned Ayurveda and called it as *Upanga* of *Atharvana veda*. The Vedic medicine contained only the beliefs of Indus valley civilization. It was only after the Vedas, many more works followed. After the evolution of six systems of philosophy, the medicine absorbed the theory of *Nyaya, Vaiseshika* and *Samkya* philosophy for the philosophical ideas. Chanakya described in his *Arthasastra* about a kind of gold which was called '*Vedajam*', transmutated into gold. It may be infered that the *Rasavada* of Siddhars must have existed prior to this period of 3rd century B.C.

Sangam period (200 B.C. to 200 A. D.) is considered to be a classical period in the history of Tamil Nadu in which the Tamil people developed a glorious culture. One can witness the superior cultural aspects of the Tamil people in art, drama, literature, music and different shades of fine arts. But no written medical records are

available for the above period. But from the available literature only the medical science followed by them could be understood. Many Siddhars were living in the Sangam period and their thoughts had been permeated in the literature. The recent study on the principles of Indian philosophical system showed that the Sankya philosophy was the oldest one, which was founded by a Siddhar Kalpika[24].

The *Sankya* philosophy propounded a theory of the evolution of life in twenty five *Thathuvams* or principle elements. At a later period, *Saiva Siddantham* of Tamil Nadu absorbed the *Sankya* philosophy and it elaborates the *Thathuvam* into ninety-six. It was also absorbed in the medicine of Siddhars as the *Saivism* gave more scope and wider grounds for the development of *Tantric cult.*

Siddhars embraced the philosophy of *Saivism* and included the traces of its concepts in the medical practices. The philosophical ideas were not directly involved in the administration of medicine. It was the beginning of the amalgamation of philosophical ideas and medical concepts during this period. According to the authors of Siddha medicine there is a very close and intimate connection between the body and mind. The *Tridosham* exercises the same influence upon the mind as upon the body. When the body is affected by disease the mind also gets diseased. This theory is very well exhibited in the literary work *Tholkaappiyam.*

Poets and medical practitioners such as Maruthuvan Damodaranar and Maruthuvan Nalasutranar mentioned that independent practitioners efficiently carried out the practice of medicine. *Tholkaappiam* also attested to this fact and mentions that

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[24]C.K. Sampath. **Op. Cit.** p.7.

both male and female physicians were there. It also mentions the quality of physicians along with the code and ethics to be followed by them in a nut-shell. They were fond of moral and professional rules, which are similar to the description of Agasthiar in his '*Paripoornam*'.

Jainism had an impact on the life during the Sangam age in many fields including medicine also. The Jain monks took interest and learnt medicine of the land. They started practicing medicine in the monasteries. It is evident from the names of their literary work which are used in Siddha medicines even today. The qualities of good medicine were also mentioned and this might have become the basis for proper definition of medicine by Thirumoolar in his treatise. The theory of immunity was also rudimentary and it was known to the physicians of the Sangam age even before the Chinese and English physicians. The basic principles and methods of surgery like incision, excision, separation, anastamosing, suturing, application of bandage, cauterization and amputation were known and practiced by the surgeons.

But it seems that the principles of asepsis were not known and antiseptics were not used. Along with surgery, basic principles of embryology, obstetrics and gynaecology including pediatrics were known to them which led to the foundation for a descriptive branch in the later period of Siddhars. The art of nursing was in vogue at that time. Nurses were a part of the army and took care of the wounded soldiers and carried them to the camps for treatment[25].

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[25]A. Duraisamy Pillai. **Iyingurunooru – Commentary** (Tamil), Annamalai University, p.972.

Antiquity of Siddha Medicine

It is difficult to probe into the beginnings of Siddha medicine. Most historians were satisfied by the claim that the system began along with the Tamil language and the Dravidians were supposed to have migrated into Peninsular India from the Mediterranean basin of Western Asia in the pre–historic age or before 1200 B.C.

The geography of Siddha system in ancient and medieval times demands a closer study. The geography of the region, which forms the cradle of the Siddha system of medicine, is difficult to determine since the centres and boundaries of activities were shifting from time to time. But it may be roughly demarcated as the region corresponding to Tamil Nadu and its adjacent areas, which were under different rulers such as Chera, Chola, Pandya and Pallava dynasty. The northern boundary seems to have been shifting with the political fortunes of rulers in the south and advance of Aryan culture as well as the Sanskrit language. It is clearly established by a closer study of ancient classical writers and through the pioneering excavations in South India that in the past, the country had extensive contact, even during the early centuries of Christian era, with Africa, Europe and the Eastern part of Asia like Indo-China and Indonesia. Some of the beliefs and practices of tribals of Africa and Australia are probably derived from the ancient stock of culture in South India.

Mythology and traditional genealogy of originators and teachers

The Siddha medicine has a background of mythology and it has genealogy of teachers, a little different from that of Ayurveda. In the works, which have a definite religious bias, the sources of all knowledge and the first propounder of the system, is God Siva, as against Brahma in the Ayurvedic system. Siva communicated His

knowledge to his spouse Uma Devi or Parvathi who in turn, transmitted the knowledge to Nandi Deva, who is the guard of Siva's celestial world. Upto this it is divine origin. Then Nandi taught his knowledge to sage Agasthiya, who imparted his knowledge to his disciples Pulathiyar, Bogar, Theraiyer and others of the *Pothigai* hills (present day Courtallam hills of Western ghats of South India). Almost all the ancient writings are attributed to the revelations of Nandi or to the teachings of Agasthiya or his school and his disciples.

Tradition and religious practices bear testimony to the numerous centers in South India, where there were ancient and medieval shrines and temples dedicated to Lord Siva who is called by various names such as Vaidyanath, Vaidyeeswara, Jwarahareswara, Agastheeswara etc. These names clearly suggest that the God would save the people from diseases. This is reminiscent of temples of the Aesculapius in Greece, Rome and Asia Minor in the centuries immediately before and after Christ.

There are many shrines for Agathiyar, in the complex of temples or as an independent deity in some isolated temples. His name occurs in Hindu epics and *Puranas*. There are numerous sculptures, icons and pictures found in remote corners of the Tamil country, preserved in traditional physician families, palaces of former rulers and in Hindu religious institutions in various places. Ancient tradition in South India lauds the work of Agasthiya as a Siddhar and associates him with medicine, alchemy and yoga[26].

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[26]V. Subba Reddy, **'History of Siddha Medicine-Need for further detailed studies'**, Bulletin of Indian Institute of History of Medicine, Hyderabad. 1973. 3(4), pp. 182-184.

A sketch on Siddhars

There are many words that denote the great people who lived in the ancient days and were connected with medicines. The word RISHI can be equated to the Inventor of a concept of a high philosophy. Another word *munivar*, can be compared with the social reformers. This word is derived from the Tamil word MEN means to think. The word SIDDHAR is derived from 'sittham'. There is no exact word in English which adequately describes it. It is not mind, for mind is a limited instrument through which "Chit" (aspect of mind) is manifested. It is that which is behind the mind and by which the mind itself is set to attain great heights by transcendental meditation. It may be equated to 'mystic' in English.

The Siddhars lived in Tamil Nadu about 1800 years ago. But actually the word 'Siddhar' does not appear in Sangam literature. In Tholkaappiyam and Thirukural a word 'Neraimozhi Mandhar' can be referred to Siddhars[27]. The Siddhars generally propounded their concepts which were metaphysical in nature.

AGATHIYAR: Thiru A. Swami Chidambaranar in his book titled 'Agathiyar Varalaru' mentions that there were 37 different Agathiyars lived during different periods. He is revered as the father of Tamil Literature. He had specialized in all fields such as language, alchemy, medicine, meditation (yogam) and spirituality (gnanam). There are nearly 96 books in the name of Agathiyar. Some of the books are *Vedhinool muvagai kaandam; Vaidiya Chigamani; Sindhuram 300; Mani 400; Sivajalam; Sakthijalam; Shanmugajalam; Vaidiya kannadi; Vaidiyam1500; Vaidiyam*

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[27]R. Manikavasagam. **Nam Nattu Siddharkal,** (Tamil) Manikavasagam Publishers, Chennai. 1978. passim.

1600; VaidiyaRatnagaram; Naadi sastram; Agathiar Siddha Vaidiyam; Agathiyar gana Pannirandu and Vaidiya kummi. These are the books found in his name[28].

AGAPAI: It is belived that he belonged to the Yadava community. As all his poems end with the word Agapai, he was named after it. He propounded that the moment 'ego' (symbolised as a devil) enters the human mind, the mind becomes restless and uncontrollable. It can only be exorcised by self-realisation. He attained the eternal bliss by the yogic practices. Most of his works on medicine are mentioned indirectly, which is described as maraiporual[29].

EDAIKADAR: There are various views about his native place. Some believe that he belonged to the 'EedayanThittu' in Thondaimandalam or Eedaikaadu in Kerala. He was said to be the student of Bogar another great Siddhar. Some feel that he was the student of Konkanar[30].

ROMA RISHI: He was considered to be an expert in writing Medical books. He was believed to be the son of Bujandar. *RomaRishi 500; RomaRishi 100; Pancha Padchi Sastram* are some of the works to his credit. Through his poems it is known that he was a contemporary of SattaiMuni. He was well versed in the art of astrology and astronomy.

KARUVURAR : He belonged to Karuvur in Kongu Nadu. It is believed that he lived along with Agatiyar. According to the Karuvur Thalapuranam (History of Karuvur), he belonged to a Brahmin community. He was the student of the famous

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[28]ibid. pp.36 to 53.

[29]M. Mathiazhagan, **Siddha Maruthuvam**, (Tamil) Vol. I: History. *Thamizh Valarchi Kazhga Veliyedu*, Chennai. 2003. pp. 217-218.

[30]**Thirukoyil**-A Tamil journal, September 2005, pp.34-36.

Siddhar Bogar. When Raja Raja Chola constructed the famous Brahadeeswara temple it is said that Karuvurar made the *AstapandanMarundu* for the installation of the main deity. There are 30 poems found in the *'Siddhar ganakovai'*. He was well known for his alchemy and Kaya kalpa (medicine for longivity of life) techniques.

KUTHAMBAI SIDDHAR: People feel that he was called by this name because he had always used an herb by the name *Kuthambai* or *Mukutripudu* for medical purposes. Nearly 30 of his poems are found in the *'Siddhar ganakovai'*.

KORAKKAR: He is called the Korakka Nadhar, based on the work by name *Siddhar ganakkovai*. Thirukkona Malai is the name of the place where he was born. But as per the Korakkar's work by the name Korakkar Brahma Gnanam18, it is said that he was born in a place near Chaduragiri Aaru. As per Bogar 7000 Korakkars belonged to Kuruvar clan which was a hill tribe. There is also another view that he was a Maratta. A place near Nagapattanam is to be taken as the place in which his Samadhi is situated. In *Korakkar Gnana Dharisanam* there is a mention about a work called *Korakkar Kalai Gnanam 500* which is not available today. In *Korallar Karpa Soothiram* 31 there are references of certain preparation of Legiyam and Poorna Churanam for many ailments.

SATTAMUNI: He was one of the eighteen siddhars. He is known by various names like Kambilli Sattamuni, Kailasa Sattamuni, Sattanadar and Sattamuni. He was called by these names because he was always wearing woolen clothes called kambli sattai. His birth place is not known, but it is believed that he belonged to Ceylon. He is said to have lived during the 10^{th} century A. D. It is said that he was the student of Bogar. Some say he attained Samadhi in Srirangam and some are of the opinion that

the Samathi was in Sirkali in Tanjore district. Some of his works are *Sattamuni Vadha Kavyam* 1000; *Sattamuni Vadha Soothiram* 200; *Sattamuni Gnana Villakkam.*

SIVAVAKKIYAR: It is said of him that when he was born he uttered the word "siva siva", so he was called by that name. Nearly 526 poems which were composed by him are to be found in the *Siddhar ganakovai*. Sivavakkiyar composed of maximum number of poems in this group of siddhars and was considered that in his previous birth he was Vaishnava saint Tirumazhisai Alwar. He is said to belong to the 10th century A. D.

THERAYAR: He was the disciple of Dharnasowmiyar and some say that he was the disciple of Agathiyar. His degree of superiority in the Tamil language is praiseworthy, especially the poetic form of Yamahavenba written by him is considered to be in classical style and this is a good contribution by him. He has also mastered the pharmaceutical preparations, classification of diseases and their effective management. Some of his works are *Pathartha guna chinthamani; Neerkuri nool; Neikurinool; Thalaivarkasarukam; Cikkichiaayeram; Chikamanivenba; MaruthuvaBharatam; Vaidyayamaga venba; Manivenba; Nadikothu; Noi anuga vedi; Noyinsaram* and *Noyinkarisal* which describe various preparations of medicines for various diseases.

PAMBATTISIDDHAR: The well known Siddhar who may be considered as the true representative of his tribe. He takes the snake for a symbol to represent the human soul and uses the expression 'Aadu pambe' as a refrain at the end of the stanza. He belonged to the Maruthamalai in Kongunadu . Even today there is a cave by this name. He was said to be the student of Sattaimuni. To his credit there are a few works like *Siddhar aarodam* and *Pambatti siddhar padalkal.*



Siddhar. TIRUMOOLAR
FATHER OF SIDDHA MEDICINE

Medicine means one that ensures physiotherapy
Medicine means one that ensures psychotherapy
Medicine means preventive against diseases
Medicine means one that ensures preventive against mortality.

- Tirumandiram, 8000.

MACCHAMUNI: He is said to have come from a place called Machai Desam which may be the place in the Pandya kingdom. As per Korakkar Siddhar Villamma, a place by name Maraikkattur or better known as Vedaranyam was his native place. *Thiru Vagam 800; Vaidithyam 800; Vadha nekandu; Macchamuni vaipu* are the books written by him[31] in which medicines are described for some diseases.

PULIPPANI SIDDHAR: Many are of the opinion that he came along with Bogar from China and stayed here in Palani hills in the Tamil country. The work, *Kongumandalasadhagam* also testifies to this fact. He is said to have lived during the 5th century A.D. and some feel that he lived during 10th or 11th century. There are nearly eight works in his name[32].

THIRUMOOLAR: This Prince of Mystics is said to be the disciple of NandhiDevar. He came from Mount Kailas the abode of Lord Siva to meet Saint Agatiyar. It is said that he was a devotee of Lord Siva and lived for over a period of 3000 years and in the end of every year he opened his holy lips to utter a great truth couched in mystic principle but apparently a simple verse, and again he used to re-enter into his Samadhi. The 3000 stanzas compiled together are called the *Tirumantram. Tirumantram* deals with the body and soul. Leaving aside the legendary age attributed to the saint, his age may be approximately fixed between the 5th and 6th century A.D. To say that he wrote one song for one year and completed his work of three thousand songs in 3000 years is only to bring out the fact that he brought the knowledge of three thousand years in three thousand crisp verses in Tamil.

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[31]M. Mathiazhagan. **Op. Cit.**, pp. 219-269.

[32]R. Manikavasagam. **Nam Nattu Siddharkal** (Tamil), Manikavasagam Publishers, Chennai. 1978. pp.121- 226.

The number of verses in each chapter and the number of chapters in each *Thanthiram* for the nine Thanthras of Thirumantram are given below;

Tirumantram is said to be a summary in Tamil of the nine Agamas in Nine Tantras. They are 1. *Karanam* – I *Thanthra,* 2. *Kanikam* - II *Thanthra,* 3. *Veeragam* - III *Thanthra,* 4. *Chinthiagamam* - IV *Thanthra,* 5. *Vathulagamam* – V *Thantra,* 6. *Vyamalagam* – VI *Thanthra,* 7. *Kalothragamam* – VII *Thantra,* 8. *Suprabhedagamam* – VIII *Thantra,* 9. *Magudamam* – XI *Thantra.* The introductory portion comprises of one hundred and twelve stanzas which contain a short summary of Tirumoolar's teachings. The value of Bhakti (devotion to God) is stressed by Tirumoolar who points out that those who worship in humility and "Bhakti" can get salvation much easier than even the Siddhars. Bhakti is not ruled out by the Siddhars. He asks all to give up all attachments and turn their minds towards heaven. He is considered to be equal to Agathiyar. He has been heading another school which was called 'Mulla Vargam'. He was an expert in Ashtanga yoga, and other spiritual practices to attain eternal bliss. His book *Thirumanthiram* is considered as a Bible for Thanthrik Yoga. A man who realizes God in himself need not go about in search of Him elsewhere. This stage is called Jivanmuktha[33].

BHOGANATHAR: The career and life of this great saint is quite awe-inspiring. Some feel that he was a Chinese by birth and he followed Buddhism. He lived about 1600 years ago. But according to Bhogar KandaYogam it is said that Bhogar was undoubtedly a Tamilian and was initiated into Jnana Yogam (Kriya Dhyana Yogam) by his great guru, Kalangi Nathar. Thus, he belongs to the well-

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[33]**Enclyclopaedia of Tamil Literature.** Vol. I. Introductory articles, Institute of Asian Studies, Madras, 1990. pp.327-328.

known ancient tradition of NavaNath Sadhus who trace their tradition to Yogi Siva who was called Sivanath. Bhogar was born in the Tamil month of Vaikasi under the star Bharani, second phase in the Viswakarman caste. His father was also known as Viswakarman. Later on he moved to Palani and he attained the Sourba Samadhi in his 300th year. His famous work was *Bhogar* 7000[34].

NANDHI DEVAR: He is considered to be the eminent as well as foremost of the other Siddhars, who received the blessings of Devi and got the name 'Kailasa Siddhan'. Since the period to which he belonged was the epic age no definite information is available about his other activities. It is said that Lord Siva was the author of seven lakhs stanzas dealing with medicine, and these stanzas were taught to Nandhi. Tirumoolar, Romarishi, Dakshinamurthy are to be taken as disciples of Nandhi Devar based on the evidences found in their own works. Agathiar seemed to be equal to them in position and not a disciple of Nandhi Devar. The works that are available at present in the name of Nandhi Devar in the form of printed works and written manuscripts number about eighteen.

YUGIMUNI: He was considered as one of the best physicians who lived in Tamil Nadu. He has classified all the diseases and their symptoms, course of illness and treatment. His method of diagnosis also included urine analysis (oil spreading over urine sample) and is still considered as a unique contribution by Yugimuni. It is known as *Neerkuri* and *Neikuri*[35].

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[34]Yogi S. A. A. Ramaiah, **"Babaji's Yoga of Boganathar (Kriya)"**, 1982. pp.16-26.

[35] M. Mathiazhgan, **Op. Cit.**, passim.

AZHUKUNI: He was another Siddhar whose poems have a tinge of melancholy. His poems emphasize on the mortality of human beings and stress the fact that life is transitory. By regular use of Azhukanai herb, he was considered to have conquered death and attained immortality. Another view is that 'Azhukanni' is supposed to be a rare 'Kalapa Herb' and he used it in his preparation, so he was known by this name.

RAMADEVAR: He was better known by the name 'Yakobu. He belonged to the Muslim community and is said to have lived during the period of 14th century A.D. He has mastered the art of mysticism and his teachings were like a tonic for many who were afflicted by various diseases.

KAKABUJANDAR: The legendary story says that he was created by Lord Siva. He was an expert in Yoga. There are many books to his credit. Some of them are *Kakabujandar Upanidatham* (31 poems); *Kakabujandar Kaviyam* (33 poems) *and Kakabujandar Kural* (16 poems) and totally 159 poems are found to have been written by him. Apart from this there are also some poems in *'Siddhar ganakovai'*.

KONGANAR: He was another Siddhar living in Kongunadu in the Tamil country. Some are of the view that he was living in Konganigiri which was located in the Coimbatore district .There is a specific reference about him in the devotional verses of Thirumazhisai Alvar, one of the Vaishavite saints and so it is presumed that he might have lived during the 4th or 5th century A.D. But some are of the idea that he belonged to the 10th century because there is a reference in *Konganar Kadaikandam 5000*, stanza 132 and it is evident that Bogar was his teacher, who belonged to 10th century A.D. Kadaipillai and Sangali Siddhar were his disciples. *Konganar kadaikandam; Ganam 100; Kulikai; Thirikadikam* are some his works. In addition to

this there is a temple in Kondumbalur near Virali Malai in Pudukottai District by name Konguni Siddhar Kovil, with a statue depicting the Siddhar riding on a fierce looking animal with a female statue by the side. The local people call it as Siddhayya Kovil and associate it with Konguni Siddhar[36].

RAMALINGASWAMIGAL: Vallalar as he was popularly called lived during the 19th century. He was born on October 5th 1823 in Marudur in North Arcot district. His father was Ramayapillai and mother Chinnamai. He moved to Chennai and during his later part of his life he lived in Vadalur in Cuddalore district in Tamil Nadu. He started a Dharama Salai (Choultry) there. He has composed many poems on Lord Siva and Lord Muruga. Though he was not considered as a Siddhar, many feel that he lived like a Siddhar. On January 13th 1874 he disappeared from his house and nothing is clearly known about his death. His philosophy of universal brotherhood *'Samarasa Suddha Sanmargam'* and worship of Jothi (Light) crossing the boundary of linguistics and geo and religious sentiments is widely respected in Tamil Nadu. He preached non-violence and he was quite against the killing of animals and birds for food. He advocated vegetarian food and strongly asserted that this food alone would pave the way for a disease-free and healthy life.

Siddhar is a Tamil word that is derived from its root '*Siddhi*' which means perfection in life of heavenly bliss. Siddhars were great intellectuals and they spoke about medicines for various diseases in their works. They were selfless and broad-minded saints who visualized a world of people without diseases and sufferings. *Siddhi* generally refers to eight kinds of super-natural powers *Anima*, *Mahima*,

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[36]R. Manikavasagam. **Op. Cit.,** pp.185-195.

Karima, *Lahima*, *Praapti*, *Brahmiyam*, *Yeesathvam* and *Vaasithuvam*. A devotee becomes a Siddhar, if he crosses the advanced stage of piety. The Siddha (Citta) as the word denotes, is a truth-perceiver. Siddhi (Citti) means the essential conscious force of conscious being and the truth perceiving conscious vision and knowledge respectively. He is the one who believes that the apparent man has to become the inner real man.

It is believed that one who is perfect in *Ashtama siddhi*[37] (eight supernatural accomplishments) is considered as a Siddhar.

The following are the eight accomplishments:

1. Anima-the power of reducing one's self or anything else to the size of an atom.
2. Mahima-the power of increasing one's bulk without limit.
3. Lahima- the power of rendering one's self or other things light, overcoming gravitation pull.
4. Karima- the faculty of increasing weight, solidity etc.
5. Praapti- the power of attaining everything desired, and to know the past, present and future (Trikala Buddhi).
6. Brahmiyam-the power to overcome natural obstacles and go anywhere in the universe.
7. Yeesathvam-supreme dominion over animate or inanimate nature.
8. Vaasithuvam-the power of enchanting, changing the course of nature or assuming any form.

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[37]Enclyclopaedia of Tamil Literature. **Op. Cit.,** pp. 327-328.

The Siddhars were experts and had mastered miraculous powers. They were men born with great talents and they lived without afflictions of diseases hundreds of years ago in the Tamil country.

By their devotion and search for truth they achieved perfection (*Kaaya Siddhi*). There is reason to believe, that during the commercial intercourse for a considerable time with Tamils in South India, the civilized nations might have also obtained information about the healing art and hence the influence of Indian medicine permeated far and wide into China, Arabia, Egypt, Greece and Rome and enriched their *Materia Medica* to a great extent. There are references in Siddha medical books to prove that Bogar and other Siddhars actually visited China, Arabia, Persia, Turkey and other places using their super-natural powers.

Fundamental Principles of Siddha

According to Siddha science, the universe is made up of two entities – matter and energy equated to Lord Siva and Goddess Sakthi. Man is said to be the Microcosm and the universe is Macrocosm; what exists in the universe exists in man also. The two co-exist and are inseparable. This is aptly described in *Sattamuni Gnanam* as[38]

"Human body is in Universe
Universe is in human body"

"அண்டத்தி லுள்ளது பிண்டம்
பிண்டத்தி லுள்ளது அண்டம்"

Man is nothing but the universe in miniature containing the five elements which constitute the mineral, vegetable and the animal kingdom. The five elements are

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[38]K. S. Uthamaroyan, **Siddha Maruthuvanga Surukam**, (Tamil) Government Publication, 1953. p.21.

known as *Panchabhutas* – Earth (*Mannu* – solid), Water (*Neer* – fluid), Fire (*Thee* – radiance), Air (*Vaayu* – gas) and Sky (*Aakasam* – ether). All that created are evolved matter in the world, whether it is animal, vegetable or mineral, everything falls under these categories. The human anatomy and physiology, the causative factors of the disease, the materials for the treatment and cure of disease, the food for sustenance and all such things fall within the five elemental categories[39].

Basis of treatment

According to Siddha, the three physical elements of the external world viz. air, heat and water form the three fundamental principles on which the constitution of the human being is based. The three elements are known as the 'humours' or '*tridosha*'. They are *Vata* (wind), *Pitta* (bile) and *Kapha* (Phlegm) which represent respectively the air, fire and water of the five elements which form the connecting link between microcosm (man) and the macrocosm (world). These three humours maintain the human body through their combined functioning. The normal order of the three humours in the body is 1:2:4. When in imbalance, they bring about diseases. The imbalance is caused by astral influences, poisonous substances, psychological factors etc.

Medicines are prescribed to set right the imbalance of life-factors either by addition, reduction or neutralisation, as all the matters, be it herbs, metals or minerals which contain the five elements.

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[39]R. Kannan. "Siddha – a unique system", **The Hindu. Folio on Indian Health Traditions**, October 8, 2000. p.20.

'Humour' – In the whole text means the 'Tridoshas' Viz – Vatha, Pitta, Kapa, which are affecting the health aspects of human beings.

Diagnosis

The diagnosis of disease involves identifying its causes. The word *Noai Naadal, Noai Mudhal Naadal* indicate the approach to the process of diagnosis. *Noai nadal* means, the approach to the disease. *Noai Mudhal Naadal* denotes the determination of the etiology of the disease. To diagnose the disease, the physician first investigates the cause of the disease, the signs and symptoms, complications if any, and pathological changes at the tissue level (*dhathu*). The Siddhars look at the body and the disease together to arrive at a conclusion regarding the condition or diagnosis of the case. This conclusion is an essential pre-requisite for the treatment. Diseases are diagnosed mainly with the help of signs and symptoms. In addition, there are eight other important factors which help in finding out the disease and imbalanced life factors. They are pulse (*Naadi*), touch (*Sparism*), tongue (*Naa*), colour (*Niram*), speech (*Mozhi*), eyes (*Vizhi*), faeces (*Malam*), and urine (*Moothiram*)[40].

The Siddha system of medicine emphasises that the medical treatment shall be done not merely on the basis of the superficial causes of the disease but has to take into account the patient, his environment, meteorological consideration, age, sex, race, habits, mental frame, habitat, diet, appetite, physical condition, physiological constitution etc. This means the treatment has to be individualised with very less chances of committing mistakes in the diagnosis or treatment. Based on the etiology, signs and symptoms the treatments are given properly for all the diseases by different Siddhars. Thus, they have classified the diseases into 4448 varieties.

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[40]V. Narayanaswamy. **Introduction to Siddha System of Medicine,** Pandit S. S. Anandam, Siddha Research Institute, Madras, 1975, p.29.

Pulse reading

The science of pulse reading is peculiar to the Siddha system. Traditionally the science of pulse was taught by the guru to his disciples. Diagnosis of diseases by pulse reading requires great skill and experience. According to the Siddhars, the pulse is the manifestation of *praana* in all living systems and is the cosmic energy responsible for the evolution of the universe as it penetrates, surrounds and seeps through everything. The nadis are three (1) Idaikalai or left side breath,(2)Pinkalai or right side breath, (3)Sulimunai or the whirling of breath twist at the inner point of the nose. When the physician feels the pulse, he tells us if the three humours wind, bile, and phlegm are normal or abnormal, and this is the initial stage of his diagnosis[41].

Some unique and rare practices in Siddha

Siddha system has some unique and rare practices and treatments among which the use of poisonous materials such as arsenic, cyanide, lead, mercury in the drug preparation known as *Kattu* and treatment methodology *Keerikkattal* deserve mention. In the former, the poisonous materials are processed using herbal juices and made as a stone-like form which at times of emergency can be taken to any place and used in very very minute doses to cure diseases. *Kattu* literarily means 'binding together'. There are many such preparations such as *Navapaashaanakkattu*, *Lingakkattu*, *Rasakkattu* etc. The first named contains a combination of nine poisonous materials and hence the name (Nava means nine and Paashaanam means poison). The second one contains the toxic mercury which is processed in such a way to get rid of its poisonous nature in the finished form and becomes a good drug in the

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[41]N. Kandaswamy Pillai. **History of Siddha Medicine**, Govt. of Tamil Nadu, 1979, p. 432.

treatment of many complicated diseases[42]. Siddhar Bogar made *Navapaashaana* idol of Lord Murugan and installed it in Palani which is one of the Lord's six abodes. It is said the milk poured on the idol in the Abhisheka puja ritual during the worship turns light-blue because of its chemical reaction with the chemicals present in the statue. The milk thus poured on the idol and collected, possesses medicinal value and it is a fact that it cures some of the diseases.

The other rare practice *Keerikkattal* is supposed to be the fore-runner for the present day intra-muscular injections. In this method, the affected part of the body is cut open at the skin level with the help of the sharp-tip of the boiled paddy seeds and the medicines are applied within the open portion and covered. This helps in hastening the healing process[43]. This method has special mention in the treatise, *Agasthiya's Kirigainool.*

Medicines used in Siddha system

Siddhars used naturally available materials such as herbs, metals, minerals and animal products to treat several diseases. Some of the plants (vegetable origin) were used either singly or in combination. For example, to treat Jaundice the herb Keelanelli (*Phyllanthus amarus*) is used as a single drug. For diseases like inflammation of joints, a combination of herbs is used either as mixture of dry powders (churnam) or as ghee- based preparations (lehyam) etc. The metals and minerals are processed either by heating to high temperatures (calcinations) to get parpams (powders) or soaked in herbal juices to detoxify them before making

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[42]V. Narayanaswamy. **Op. Cit.** p.29.

[43]P.J. Thottam. "Some rare practices of Siddha medicine", **The Hindu**, September, 20, 1992.

parpams. Likewise the animal products such as the horn of a deer, cattle, the internal organs of some animals are also used in certain drug preparations.

Thus, in Siddha Medicine several groups of drugs are employed using the above said naturally available materials as ingredients. The drug preparations in Siddha medicine are Mathirai, Chenthuram, Parpam, Chunnam, Pathangam, Mezhugu, Lehyam, Choornam , Thaillam, Nei and Karuppu.

Choornam -Dry powder

Mathirai - Pills

Chinthuram –Mercurical preparations

Parpam - Calcined metals and minerals as very fine powders.

Chunnam- Metallic preparations which become alkaline.

Mezhughu -Wax based medicine

Lehiyam - Syrup based medicine.

Thailam - Oil based medicines.

Nei - Ghee based medicines.

Karuppu - black coloured sulphides of mercury or arsenic

Kashayams - Decoctions

Siddhars were experts in preparation of drugs from metals and minerals in addition to herbs and animal products. Among the indigenous medicine, Siddha system makes use of metals and minerals in the drug preparation to a great extent. Even metals with high toxicity (poisons) such as mercury, gold, silver were used by them after the process of detoxification (removal of poisonous nature). The present day men of science are eager to look into these metallic drug preparations to understand the science behind this detoxification processes.

While administering these metallic drugs to the patients the physicians have to follow certain guidelines. First, the dosage must be very little, viz. a pinch or at times even the amount sticking on the sharp tip of the needle. To administer the drugs, vehicles or carrier (anupanams) such as ghee, honey, hot water, milk etc., are to be used depending upon the nature of the diseases. Thus, the same dry preparation can be used to treat different diseases by using different anupanams.

Most of the indigenous medicines including Siddha prescribe Pathyam, the food restrictions during the period of treatment. This is because most of the diseases are due to the wrong food habits over a long period of time. For example, patients suffering from Gastro-intestinal disorders such as acidity, indigestion, constipation etc., are advised to avoid spicy food as these are the precipitating factors for the above diseases. Hence, during the treatment bland food (gruel, rice with butter milk) is prescribed. The diet restrictions to prevent diseases had been mentioned in the Great Tamil work *Thirukkural* by Thiruvalluvar under the heading medicine in section 95. It is to be pointed out here that many in Tamil Nadu feel that Thiruvalluvar himself was a Siddhar. While giving medicine to patient the dosage of medicine to be administered is also to be decided by taking into account the patient's age, the severity of the disease and the duration of treatment (Kural no.949).

As any other drugs the indigenous drugs also show side effects and allergic manifestation if an improper drug is administered or if there is an over dosage of a proper drug. Hence, the role of physicians in the diagnosis and drug administration is very important and these two aspects are stressed very much in the traditional medical literature including Siddha[44].

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[44]Interview with Dr. T. Anandan, Research Officer, CRIS, Chennai, 6th January. 2006.

Kayakalpa

A notable treatment in Siddha system is the Kayakalpa which is used for rejuvenation and for maintaining the youthfulness for a long time. Use of certain products of plants such as *Aloe indica, Eclipta alba,* and neem are supposed to be extraordinarily beneficial to the human internal system as a whole and above all the intake of muppu, a specially prepared mixture of three salts is advocated for a long and healthy life. Of the mercurial drugs according to Bhogar, mercuric sulphide with Gold and borax would be good for rejuvenation and this preparation is mentioned in detail in Bhogar's works[45].

Important treatises of Siddha

The first medical treatise was by Siddharnar or Sivanar which contain seven lakhs stanzas. It was followed by innumerable works by the Siddhars and the number of works by them is given in the brackets and they are as follows: Agathiyar (174), Thirumoolar (43), Bogar(42), Pullipani(14), Konkanar (45), Machamuni(96), Romarishi(32), Karuvurar (74), Ramadevar (52), Therayur (29), Yugimini (22), Dhanvantri (48), Dhachanmurthi (52), Nandieesar (49), Sattaimuni(49), Brihmamuni (31) and Sundarananadar(29). Apart from this there were many other Siddhars who's works are yet to be traced. They are Sanakar, Sanathar, Sananthanar, Sanathkumarar, Pothanchalai, Pulathiar, Pusundar, Kalanki, and Senkanar.

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[45]Bhogar Yelauram-Yirandaram (in Tamil) Gangahara Thevar V, (Ed.) Palani Temple Siddhar publications Committee, Madras. 1975.

Eminent men who contributed to the development of Siddha Medicine

Constantias Joseph Beschi

Constantias Joseph Beschi was another outstanding figure who popularised the traditional Siddha medicine. Father Beschi was an Italian by birth and was also known as Veerama Muniver. He came to India in 1711 and was attracted by the Tamil culture and traditions and settled in the Tamil land. He adopted the customs and mode of life of the Tamils. He adopted a Sanskrit name 'Dhairiyanathan' which was subsequently changed as 'Veerama Muniver'. He rendered educational and medical services to the poor and needy. '*Nesakanda Venba*' and '*Anuboga Vaidya Sigamani*' are the two medical classics written by him on the basis of the rich experience he obtained while preparing medicines and using them amongst suffering masses[46].

Sri la Sri Ponnaiah Swamigal of Karivalam Vandanallur

This Illara Karmayogi, was born in 1890 at Rajapalayam, Tamil Nadu. He attained Samadhi at Karivalamvandanallur in 1960. He is said to have practiced the Rajayogam and possessed the knowledge of Muppu and its application to Siddha system of medicine. It is told that he had handed over the secrets to his son Dr. Pon.Gurusironmani B.A.G.C.I.M, who was the Director of Indigenous Medicine of Tamil Nadu. By his yogic practice he was able to read the future even 15 to 20 years, which is called 'Gnandhrishti' (may be termed as intuition). He was successful in preparing Rasa parpam, Thambira parpam, Thanga parpam, Abrega parpam etc., which have successfully cured many chronic diseases.

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[46]R. Thyagarajan, and K. Palanichamy. **The Life sketch of Veerama Muniver** (Beschi) and his Siddha works. Bulletin of the Indian Institute of History of Medicine, Hyderabad. 1974, p.14.

Vaidya Vidwanmani C. Kannuswamy Pillai

He was born on 28th March 1875 in Tanjore. First he became a Tamil Pandit. He secured a clerical job in which he was not much interested. He spent most of his time in experimenting the real pharmaceutical methods of preparing Siddha medicine which was at that time a confounded theory. Many Siddha physicians helped him. Raja Vaidya Salai was started were people were treated with his medicine. He was given the title 'Vaidya Vidwanmani', and was asked to write books on Siddha Medical science in simple Tamil language and they are *SikitcharatnaDeepam, Vaidya Chinthamani, Kannuswamiyam, Materia Medica* part I (vegetable Kingdom), *Materia Medica II* (animal and mineral kingdom), *Perumurai Pocket Vaidyam.* All these books started removing the ignorance of people on this system and spreading the scientific nature of this great system. His last work *'Parambarai Vaidyam',* has brought out many authentic and personally tried medicinal preparations gathered all through his life. All his four sons are now devoted to the practice of hereditary medical system.

Vaidya Ratna Sri Murgesa Mudaliar

He contributed much for organizing the Siddha system as a school of Indian medicine which was started on the basis of Usman Committee Report in the Madras Presidency. He compiled the most valuable Siddha text known as 'Gunapadam'(Moolgai Vaipu).He has also given many suggestions to the committee which are as follows (1) Collecting all the old works and preserving them in a central place, (2) Rewriting them in the light of modern science, (3) Printing them gradually, (4) Reprinting those works freed from the various errors to which they are prone to, (5)Translating useful work in the foreign language, (6)Establishing colleges and

schools in important centres with necessary equipments, (7)Establishing dispensaries in every group of villages for treating the patients, (8)Establishing hospitals and asylums in important centres of districts, (9)Creating a garden wherein measures should be taken to grow herbs, plants both of ordinary and extraordinary nature for educational purposes and preparation of medicines, (10)Establishing a museum wherein preserving of all drugs and materials such as metals, salts, uparasa, arsenic and dried plants with names in various languages.

Pandit S. S. Anandam

He was well known as 'The Sun of Medicine'. He was born in Kumbakonam on16-3-1876. He was the student of Dr.U.V. Swaminatha Iyer the great Tamil scholar of Tamil Nadu. He was a leading member of Justice Party as well as in the Corporation Council of Madras. He was also responsible for naming the New Mambalam area in Madras as 'Thiagarayanagar' and the splendid park as 'Panagal park. His preparations of gold with herbal combination so as to be used for medicinal purposes are considered to be miracle medicines. He has given some of his opinions to the Usman Committee about the efficacy of Siddha system and they are as follows: (a) The treatment according to Siddha system will not cost as much as that of allopathic medicine, (b) The disease do not recur and the patients do not suffer any relapse of the disease. (c) At present these medicines are not encouraged and so they are rarely available. If the old system is revived these Tamil medicines will become very cheap. (d) The Tamil medicine are not extinct. In most of the villages thousands of them are in daily use and there are many doctors in these villages. (e) The Siddha system is still popular not only in the Madras Presidency but also in Ceylon, Burma, Straits Settlements, East Indies and Madagascar. (f)Sufficient funds should be

collected to establish 'A Tamil Medical Research centre 'and a laboratory to prepare medicines. (g) Students who come out successfully from this Medical Institution should be provided with employment in the hospitals under the charge of the Panchayat unions, Taluk boards and municipalities. Government officers, Major district municipalities, local boards and other organizations and they should help this institution with necessary funds.

Valyananda Swami

He was another expert of Siddha system of medicine. He was born in Karaikal. He studied Tamil literature, Siddhantha philosophy and Siddha system of medicine in Dharmapuram Mutt .He had his scientific training under French scientists. His Western scientific education and deep knowledge of Siddha system stood in good stead in the preparation of medicines. He had popularized the Siddha system of medicine among the people of Tamil Nadu. He led a simple life as a Saivaite saint and was more known as Saiva Acharya well versed in religious rituals. His methods of prescription of Siddha medicine to people were noteworthy and his diagnosis of diseases and his steps to cure them were lauded by many[47].

Abraham Asari or Abhirami Asari

He was patronized by Maharaja Serfoji of Thanjavur and guided by Reverend Swartz the well known missionary and guardian of Maharaja Serfoji. He became well versed in Siddha medicine. He was sent to Europe to get himself trained in subject of Chemistry and western medicine. Before he returned, Maharaja Sarfoji passed away.

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[47]N. Kandaswamy Pillai. **History of Siddha Medicine**, Govt. of Tamil Nadu, Madras. 1979. pp. 547-555.

He lived in an outhouse attached to Swartz Church within the small fort known as 'Sivaganga gardens' and started his work to treat the sick. He had most efficacious medicines for poison. It is said that he new the art of manufacturing artificial gems. Thus, after his demise, there was a hunt for his paper written in Tamil and French. It is stated that his papers on Siddha medicine were carried away by the German missionaries who were associated with him during the days of his medical practice.

Dandapani Swamigal

He was a notable poet of the 19th century who wrote a Pillai Tamil named *'Vakatappillai Tamil'* dealing with medicine and diseases in the style of general Siddha literature.

Pudukkottai Samiyar

He was a sincere Siddha physician of the 19th century. He lived a life as prescribed in the Siddha system. He was of the opinion that there is no disease which cannot be cured if found out at the very beginning and treated properly. He was a much respected unostentatious Siddha physician of his age. He was an intellectual who correctly interpreted many of the ambiguous and intricate verses of many works on Siddha literature.

Sigamani Pandhithar

He was a rationalist who strictly followed the Siddha system. He was able to convince the learned public that Siddha system was quite independent of Ayurveda though there were some similarities and common features in them. His evidence with reference to Siddha system before the Usman Committee more than half a century ago may be taken as an outline information of Siddha system of medicine in Tamil.

Virudhai Sivagnana Yogigal

This yogi was a Stalwart champion of the independence of Tamil culture and the most respected Siddha physician of his age. It was he who insisted on calling this system as Siddha. He had some secret Siddha receipes which served as panacea and elixirs. His services towards the development of Siddha system are praiseworthy.

Abraham Pandithar of Thanjavur

He was born on August 2, 1859 at Samburvadagarai. The rise of Abraham Pandithar from obscurity to a notable position and fame is a fitting tribute to his scholarship and industry. He started his life as an elementary school teacher and learned about the Siddha system of medicine, and his vigorous study helped him to manufacture drugs for various ailments. He is well known for his contribution to Carnatic music also.

Sri Mathuram and Guru Medical Hall at Trichy

Sri Mathuram of Tiruchairapalli was another dynamic man, who established a Guru Medical Hall for preparing Siddha medicines. Guru Medicines are very popular among people even to-day not only in India but also outside India. The Pharmacy at Trichy, established by Sri Mathuram is developing in manifold ways, catering to the needs of the people all over who have good faith in this system[48].

Siddha Educational Institutions

As the curriculum of Siddha system of medicine is in Tamil language, the educational and research institutions are confined to Tamil Nadu State only till recently. There are two Siddha Medical Colleges run by the Government of Tamil

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[48]ibid. pp. 556-559.

Nadu and four by private managements. The first Government Siddha Medical College was started in Palayamkottai in Tirunelveli district in 1964 and the second at Palani in the then Madurai district in the year 1985. In 1993 the Palani Medical College was shifted to Chennai and housed at the Arignar Anna Government Hospital for Indian Medicine campus in Arumbakkam. The four private Siddha medical colleges are Velu Mailu Siddha Medical College, Sriperumandur (Kanchipuram district), Sriram Siddha Medical College, West Tambaram (Kanchipuram district), Akilla Thiruvithamcore Siddha Vaidya Samgam (ATSVS), Munchirai (Kanyakumari district) and Vinayaka Mission's Research Foundation, Salem.

All these institutions conduct four-year under-graduate (Bachelor of Siddha Medicine and Surgery) Course while the Government Siddha Medical Colleges at Palayamkottai and Chennai conduct three-year Post-graduate course (Doctor of Medicine) in five disciplines. These courses are affiliated to the Tamil Nadu Dr. MGR Medical University. A Siddha graduate can start his practice after undergoing a one and half year Internship training and registering his name with the Central Board of Indian Medicine functioning under the Commissionerate of Indian Medicine and Homoeopathy.

Besides the above, the Arignar Anna Government Hospital for Indian Medicine in Chennai conducts Diploma course in Pharmacy (Siddha) course.

National Institute of Siddha

In order to give vigour to the propagation and development of Siddha medicine, the Government of India had come out with a proposal to start the National Institute of Siddha (NIS) in Chennai. The foundation stone for NIS was laid in the year 1998 in Tambaram near Institute of Thoracic Medicine in the land allotted by the

Government of Tamil Nadu. The NIS is a joint venture by the Government of India and the Government of Tamil Nadu. The full-fledged Institute was inaugurated by the Hon'ble Prime Minister of India Dr. Manmohan Singh on September 3rd, 2005. At present NIS is engaged in out-patient treatment and conducting M.D. (Siddha) course which is affiliated to the Tamil Nadu Dr. MGR Medical University[49].

Research Institutions

The research studies on Siddha are being conducted in the four institutions functioning under the Central Council for Research in Ayurveda and Siddha (CCRAS) which is an autonomous Council under the Ministry of Health and Family Welfare, Government of India and they are Central Research Institute for Siddha, Chennai, Literary Research Unit (Siddha), Chennai, Clinical Research Unit (Siddha), Palayamkottai and Survey of Medicinal Plants Unit (Siddha), Palayamkottai. In addition, an Herbal Garden for Medicinal Plants used in Siddha is also functioning in Mettur in Salem district[50].

Ancient Siddha Medical books

The earliest mention on the use of medicinal plants is to be found in *Thirumoolar Thirumanthiram, Ennayiram, Tholkaappiam* and many ancient Tamil books of Sangam literature, which are believed to have been written a few hundred years before the Christian era. There are now more than 500 works in Tamil dealing with various subjects such as science of life, nature of universe, astronomical data, cosmic dance, atomic theory, space travel alchemy, Kaya Kalpa medicine etc.

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[49]**The Hindu**, 4th September, 2005. p. 1.

[50]Interview with Dr. Aparanantham, Research Officer, CRIS, Chennai, 6th January, 2005.

Tholkaappiam declares that amongst the Tamils the class most honoured was '*Arivar*' (sages) who led a secluded and religious life outside the hustle and bustle of urban life. As a regular practice in those days they retreated to the sylvan surroundings of forests[51].

The original literary works of this period were all supposed to have been lost. There are however some important collections of verses and poems from the third Sangam period. One fragment is called '*Tirikadugam*' which means 'Three bitter drugs'. A second work is named '*Sirupanchamoolam*' referring to a well known prescription of five medicinal articles. A third work is named *Elaadhi* alluding to a medicine compared to six worldly truths, pertaining to the life of house-holders and ascetics[52].

There is a reference in *Silappadhikaaram* which states that the medical profession was in a flourishing state. There was not only, the King's street, Bazaar Street, Merchants Street and Brahmins street but also streets of Physicians, Astrologers, Agricultural communities and Jewellers. In this epic, mention is made about certain places where people obtained medical relief like in Poompuhar, a port town in Tamil Nadu where the river Cauvery merges with the sea on the east coast. There was a place with a wonder lake. By taking a bath in this lake and circumambulating the nearby temple it is believed even to-day that the crippled, the dumb, the deaf and the lepers are relieved of their sufferings and lead a healthy life.

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[51]B.Valan Arasu, *Ilakiyam velambum maruthuvam*. in. M. Sathasivam, (Ed.) ***Siddha maruthuva Aaivuk kovai***. Vol. I. (Tamil), Thanjavur Saraswathi Mahal, Thanjavur. 1990. p. 23.

[52]A. Ramalingam and G. Veluchamy. "Elements of Medical Science in Sangam", in. Subramanian, S.V and Madhavan, V.P. (Eds.) **"Heritage of the Tamils Siddha Medicine"**, International Institute of Tamil Studies, Madras, 1983, pp.44-53.

Also there was an open field near this place in which is found a shining stone for worship and people believe that by this worship mentally retarded people will get cured, by passage of time[53].

In Thiruvalluvar's great work '*Thirukkural*' supposed to have been written in the first century A.D., there is an exclusive chapter on medicine (Part II). He also mentions the importance of medicine in a number of places in his great work which is considered to be the pride of Tamils. It contains a few pertinent observations on health and its maintenance and all the references on health mentioned in the verses of *Tirukkural* reveal the knowledge and state of medicine in the Tamil land more than 2000 years ago[54].

***Pathinen Siddhars*:** Though the Siddhars are said to be eighteen in number, there are atleast twenty lists of *Pathinen Siddhars*. The names of some Siddhars find place in almost all the lists. In some lists the number exceeds eighteen. Three such lists are mentioned below.

List1: 1.Nandi, 2.Agathiyar, 3.Thirumoolar, 4.Punnakkeesar, 5.Pulasthiyar, 6.Poonaikannanar, 7. Idaikkaadar, 8. Bogar, 9. Pulikaieesaar, 10. Karuvoorar, 11. Konkanavar, 12. Kaalangi, 13. Sattainaathar, 14. Azhuganni, 15. Agappai, 16. Paambatti, 17.Theraiyar and 18. Kudhambai.

List 2:

1.Thirumoolar, 2.Ramadevar, 3.Kumbamuni, 4. Idaikkaadar, 5. Dhanvantri, 6.Vaalmiki, 7. Kamalamuni, 8. Boganaathar, 9. Macchamuni, 10. Konmanar, 11.

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[53]B.Valan Arasu, **Op. Cit**. pp. 24-25.

[54]Thiruvalluvar – **Thirukural-A Tamil Book,** Part II. 1998. p.192.

Pathanjali, 12. Nandithevar, 13. Bothagur, 14. Pambatti, 15. Sattamuni, 16. Sundarathevar, 17. Kuthambai and 18. Korakkar.

List 3:

1.Pattinathar, 2.Badharagiryar, 3.Sivavaakiyar, 4.Kaduvalli, 5.Azhukuni, 6.PeerMuhammed, 7.Maduraivalaswami, 8.Thirvalluvar, 9.Shakekoyar, 10.Ganapathydasar, 11.Ramarishi, 12.Thirumoolar, 13.Subramaniyar, 14.Karuvooraar,15. Kaakabujandar, 16. Kailaya Kambali, 17. Sattamuni 18. Suriya anandar, 19. Purananandar, 20. Ramalinga Swamy, 21.Gnana-sambandar, 22.Arunachala Guru and many others[55].

UNANI

The Unani-Tibb medicine widely known as Unani system of medicine has a long and impressive record in India. It was introduced in the country by the Arabs and Persians sometime around the eleventh century. It is so popular in the Indian soil that the Government of India has adopted the medicine as one of the Indian medical Systems. India is one of the leading countries so far as the practice of Unani medicine is concerned. It has the largest number of Unani educational, research and health care institutions in many parts of India.

The Unani system of medicine owes its origin to Greece. It was the Greek philosopher-physician Hippocrates (470-377 B.C.) who freed medicine from the realm of superstition and magic to give it the status of science. The theoretical

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[55]M. Mathiazhagan. **Siddha Medicine** – Part 1.(Tamil) History, Tamil Development Council, Chennai, 2003, pp.171-176.

framework of Unani medicine is based on the teachings of Hippocrates. After him a number of other Greek scholars enriched the system considerably. Of them Galen (131-210 A.D.) stands out as the one who stabilized its foundation, on which Arab physicians like Rhazes (850-925 A.D.) and Avicenna (980-1037 A.D.) constructed an imposing edifice. Unani medicine got enriched by imbibing what was best in the contemporary systems of traditional medicine in Egypt, Syria, Iraq, Persia, India, China and other Middle East and Far East countries. It had also been benefited from the native medical systems in vogue at the time in various parts of the world with different names such as Greco-Arab Medicine, Arab Medicine, Islamic medicine, Traditional medicine, Oriental medicine etc[56].

Unani medicine was introduced to India by the Arabs and soon it took firm roots in the soil. The Delhi Sultans, the Khiljis, the Tughlaqs and the Mughal Emperors provided state patronage to the scholars and even enrolled some as state employees and court physicians. The system found immediate favour with the masses and soon spread all over the country. Between the 13th and 17th century, Unani medicine had its heyday in India. Among those who made valuable contributions to this system during that period were, to name a few, Abu Baker-bin-Ali, Usman Kashani, Sadruddin Damashqui, Bahur-bi- Khuas Khan, Ali Geelani, Akbar Arzani and Mohammad Hashim Alvi Khan[57].

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[56]**An Overview of Ayurveda, Yoga-Naturopathy, Unani, Siddha and Homoeopathy,** Department of Indian Medicine and Homoeopathy, Ministry of Health and Family Welfare, Government of India, New Delhi, 2002, p. 25.

[57]**Unani Medicine in India-Central Council for Research in Unani Medicine**, Department of AYUSH, Ministry of Health and Family Welfare, Govt. of India, May 2004, p. 3.

During the British rule Unani medicine suffered a setback and its development was hampered due to the withdrawal of governmental patronage. But since the system enjoyed faith among the masses, it continued to be practiced. It was mainly due to the efforts of Shaifi family in Delhi, the Azizi family in Lucknow and the Nizam of Hyderabad, Unani medicine survived during the British period. An outstanding physician and scholar of Unani medicine Hakim Ajmal Khan (1868-1927) championed the cause of Unani system in India. Even the Viceroy of India, Lord Hardinge used to call him 'the magnet of India'. The Hindustani *Dawakhana* and the Ayurvedic and Unani-Tibbia College in Delhi are the two living examples of his immense contribution to the multi-pronged development of the two Indian systems of medicine viz. Unani and Ayurveda. The development of Unani medicine as well as other Indian systems of medicine gained considerable momentum after the independence of the country[58].

Unani medicine was the first to establish that a disease was a natural process and that symptoms were the reactions of the body to the disease. It believed in the humoural theory which presupposed the presence of four humours – *Dam* (blood), *Balgham* (phlegm), *Safa* (yellow bile) and *Sauda* (black bile) in the body. Each humour has its own temperament – blood is hot and moist; phlegm, cold and moist; yellow bile, hot and dry; black bile, cold and dry. To maintain the correct humoural balance, there is a power of self-preservation or adjustment called 'Quwwat-e-

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[58]Haklan Abdul Ahmed, **Exchanges between India and Central Asia in the field of Medicine,** Institute of History of Medicine & Medical Research, New Delhi. 1986, pp. 44-45.

Mudabbira (*Medica trix naturae*) in the body; when this power weakens, imbalance results in disease[59].

Therapeutics

In Unani system of medicine, various types of treatments are employed such as *Ilaj-bit-Tadbeer* (Regimental therapy), *Ilaj-bil-Ghiza* (Dietotherapy), *Ilaj-bid-Dawa* (Pharmacotherapy) and *Jarahat* (Surgery). Regimental therapy includes venesection, cupping, diaphoresis, diuresis, Turkish-bath, massage, cauterization, purging, emesis, exercise, leeching etc. Dietotherapy aims at treating certain ailments by administration of specific diets or by regulating the quantity and quality of food.

Pharmacotherapy deals with the use of naturally occurring drugs, mostly herbal, though drugs of animals and mineral origin are also used in the treatment. The ancient Unani physicians were pioneers in surgery and they had developed their own instruments and techniques. In Unani Medicine, single drug or combination of drugs in raw form are preferred over compound formulations. The Greek and Arab physicians encouraged poly-pharmacy and devised a large number of poly-pharmaceutical recipes which are still in vogue[60].

Diagnosis and Treatment

In Unani System, the diagnosis of disease and treatment on restoring health revolves around the concept of temperament (*Mizaj*). The humours also have a specific temperament and changes in the temperaments are related to changes in health of the individual. Thus, the imbalance of the harmony of humours and

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[59]The Hindu, Folio, October 2000, p.18.

[60]**AYUSH**, Department of Indian System of Medicine, Ministry of Health & Family Welfare, Govt. of India, New Delhi, p. 14.

temperament along with failure of one or more parts of the body to eliminate the waste causes disease. The diagnosis involves

1. Measurement of body temperature and pulse
2. Urine examination
3. Examination of stool
4. Close observation of the conditions of eyes, lips, teeth, throat and tonsils
5. Mental state of the patient.

After complete examination of the patient, treatment starts. The drugs also assigned specific temperaments like hot, cold, moist, dry etc. in different degrees. Use of drugs restores the balance of humours by activating the mechanism of the body. The drugs are also supposed to stimulate and strengthen the action of defence mechanism. In other words, drugs not only normalize the existing imbalance but also improve the natural defence mechanism of the body so as to prevent chances of future diseases. Thus, the treatment generally is preventive, curative as well as effective. The Unani system also recognizes preventive measures against diseases like inoculation and immunization. Regulation of diet constitutes an important part of treatment.

During the 13th century A.D. many Tabibs came to India and made it their home. Most important of them were, 1. Hamid-al-Din-Mutrizi 2. Hussam-al-Di-Marikali and 3.Abu Bake bin-uthmn-bin-Ali Kashan. The Muslim King Muhammed-bin-Tughlaq had learnt Unani and he himself had treated quite a large number of patients. Even Sultan Firuz Tughlaq also took a keen interest in medicine. Others are 1. Khwaja Shams al-Din Mustaufi, 2. Diya Muhammad, 3. Ilyas-bin-Shahab, 4. Shahab-bin-Abdul-Karim, 5. Mansur-bin-Muhmmad, 6. Ali-bin-Muhammad Asili, and 7. Bahwa-bin-Khawas Khan etc.

Unani in South India

There are many popular personalities who came to South India and had contributed a lot in the growth of Unani system. Some of the famous personalities were Rustam Jujani, Ali-al- Husaini, Shams al–Din-Ali-bin-al- Husaini, Tadhkira-al-Kahhalin, Hakim Iskandar bin Hamkim Isma'il-unani, Hakim Mahmud 'Alibin', Hakim Hadrat al-Allah etc[61].

YOGA

Yoga is one among the six systems of Vedic Philosophy. It is a method by which one can develop the inherent powers in a balanced manner. The literal meaning of the Sanskrit word Yoga is 'Yoke'. Accordingly, Yoga can be defined as a means for uniting the individual spirit with the universal spirit of God[62].

Swami Vivekananda defines Yoga as 'It's a means of compressing one's evolution into a single life in a few months or even a few hours of one's bodily existence.' By Yoga, Sri Aurobindo, meant methodological effort towards self perfection by the development of potentialities latent in the individual.

Yoga is not a religion; it is a philosophy of life based on certain psychological facts and it aims at the development of a perfect balance between the body and the mind that permits union with the divine; that is perfect harmony between the individual and the cosmos.

Many different interpretations of the word Yoga have been handed down over

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[61]Md. Ali and K. K. Bhutani.. 'Development of Medicine in India upto 1857'. **Studies in History of Medicine**, New Delhi. 1983. pp. 151 – 155.

[62]**An Overview of Ayurveda, Yoga-Naturopathy, Unani, Siddha and Homoeopathy**, Department of Indian Medicine and Homoeopathy, Ministry of Health and Family Welfare, Government of India, New Delhi, 2002, p. 77.

the centuries. One of the classic definitions of Yoga is' to be one with divine'. It does not matter what name we use for the divine-God. - Anything that brings us closer to understanding that there is a power higher and greater than ourselves is Yoga. When we feel in harmony with the higher power, that tool is Yoga.

Next to God saints in India have explained to us the secrets of the living body. The co-ordination of matter and energy (Siva and Sakthi) is the root cause of the formation of *Panchaboothas* in our body. *Prana* is the life-force in our body .The ninety-six *thathuvams* function by different kinds of air in our body. The nervous system is the route of *Kundalini Sakthi*. The relation between man and nature has been considered as crucification. Body can be kept pure and healthy by regulated flow of *pranavayu* into our system by Yogasanas[63].

The Yoga system of treatment is very old like Ayurveda. This system was propounded by Yogi Patanjali 2500 years ago. He founded this system in a methodical form which consists of eight components called *Ashtama Siddhi*. They are restraint (*Iyama*), observance of austerity (*Niyama*), physical postures (*Asanas*), breathing exercises (*Pranayama*), controlling sense organs (*Prathyahara*), contemplation (*Dharana*), meditation (*Dhyana*) and cutting off from the bondage of this mundane life (*Samadhi*). These steps in the practice of Yoga offer better physical health, improvement in personal as well as social behaviours and supreme mental status.

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[63] S. Chidambaram Pillai, **"Siddha System of Life"**, Chennai. 2000. Vol.4, No.8. pp.45.

The practice of yoga prevents psychosomatic diseases and improves resistance to stressful situations. Meditation, one of the eight components of Yoga, if practiced regularly, has the capacity to reduce the undesired body responses of stress situations to a bare minimum so that the mind can perform more fruitful duties.

A number of physical postures are described in Yogic science to improve the physical health as well as to prevent diseases and cure the illness. These postures should be chosen carefully and are to be practiced in a correct manner to get the full benefit of prevention of diseases and promotion of health. Breathing exercises help in proper oxygenation of blood, strengthen the respiratory muscles and protect against respiratory ailments. Many studies conducted on the science of Yoga found that yogic practice improves intelligence and memory besides empowering people to overcome situations of stress and strain. They also help to develop an integrated psychosomatic personality.

Meditation is yet another exercise which can stabilise emotional changes and prevent abnormal functions of vital organs of the body. Researches on meditation showed that it not only restrains the sense organs, but also controls the autonomic nervous system[64].

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[64]A.S. Ashok Kumar. **Asanas and Pranayama,** Yoga Books Publication, Chennai, 1999, p.239.

NATUROPATHY

Naturopathy is not a system of treatment but a way of life. Nature cure is rightly described as a system of man which utilizes the constructive principles of nature on physical, mental, moral and spiritual planes of living. Naturopathy is often referred to as drugless treatment of diseases. The system is closely related to Ayurveda as far as fundamental principles are concerned. There are two opinions regarding the approach of naturopathy. According to one opinion, ancient Indian methods are given weightage in the treatment while the other thought gives scope for adoption of western methods which are similar to modern physiotherapy.

Health is a normal aspect and it constitutes a harmonious vibration of the elements and forces composing the human entity at the physical and mental level in conformity with the constructive principles of nature as applied to individual life. Disease is an abnormal aspect and an unharmonious vibration of the elements and forces constituting the human entity.

The primary cause of disease is violation of Mother Nature's laws. Most of the health scientists are of the view that many diseases by which mankind is affected are the outcome of wrong life styles, food habits and increasing pollution in the environment[65].

Naturopathy believes in the natural methods of living and enables one to return to nature by regulating the aspects such as intake of food ,drinks, breathing,

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[65]**Indian Systems of Medicine and Homoeopathy – National and State Profiles**, Ministry of Health and Family Welfare, Government of India, New Delhi, 1988, p.89.

talking, standing, sitting, bathing, dressing, working, resting, thinking, leading a moral life, sexual and social activities etc. on a simple and natural basis.

Naturopathy pays particular attention to eating and living habits, adoption of purificatory measures, use of hydrotherapy, cold-packs, mud-packs, baths, massage and a variety of methods for treating various diseases. A carefully supervised total fasting or partial fasting is advocated to clear the body from toxins. In such an activity the supervision of Naturopath is strongly believed as essential, otherwise the patient may develop physical and emotional problems during the treatment.

Naturopathy believes that the way of life, if properly organised, can give bounties of energy, good health and happiness with the help of nature. What one has to do for the prevention of diseases, promotion of health and to get therapeutic advantages is to adopt the means available in the nature in a proper and systematic way without disturbing the nature itself while deriving the benefits.

A separate Central Council for Research in Yoga and Naturopathy was established in March 1978 as a Registered Society under the Society's Registration Act, 1890. The Council had been rendering financial assistance since 1981 to the Yoga and Naturopathy Institutions for conducting research and training. Initially 13 projects of Naturopathy and 12 projects of Yoga, were taken up under Research Oriented Scheme.

Morarji Desai National Institute of Yoga, New Delhi is an autonomous organisation fully funded by the Department of AYUSH, Ministry of Health and Family Welfare.

Presently 18 Universities are imparting Yoga education for public by organising Yoga sections under their control. Out of these, 10 Universities are being upgraded as full fledged department of Yoga under the new scheme of University Grants Commission (UGC) to promote Yogic Culture. The department will have provision for Graduation and Post Graduation courses in Yoga along with Ph.D in the subject[66].

AMCHI MEDICINE

Ladakh is a remote region in the northern part of India and forms part of Jammu and Kashmir State. It consists of two districts Leh and Kargil with a total area of about 97,100 sq. km. and a population of about two lakhs constituting 27 % of the total population of Jammu and Kashmir. Ladakh, though a remote border land with virtually no surface communication for more than six months in a year has surprisingly never been isolated. Continuous cultural and commercial contacts had always existed between Ladakh and the surrounding regions of Tibet, HimachalPradesh, Kashmir, Central Asia. This interaction helps to maintain trade ties between these places. The inhabitants of Ladakh are Mangoloid in race.

The people of this region have their own system of medicine known as 'Amchi Medicine' or 'Tibetan Medicine'. The Amchi medicine has been in vogue in

[66]**An overview of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy in India,** Ministry of Health and Family Welfare, Government of India, New Delhi, 2002, pp. 84-87.

Ladakh district for the past many centuries. The system traces its origin to Ayurvedic medicine and has roots since 2000 years in India. It was brought to Tibet in the 7th century A.D. and is studied and followed with great interest and care throughout Ladakh. The Amchis give much importance to the public health. Since the dawn of history, man has been in search of ways of finding cure and relief from mental and physical ailments. The ways were in the form of witch-craft, benediction etc. It was at that time Lord Buddha delivered his original Amchi system of medicine, while he was meditating four years in the forest which was rich in medicinal herbs, somewhere near Bodh Gaya. During the reign of King Streng-ki-Chan (750 A.D.) in Tibet, a renowned Pandit named 'Barochana' was sent to India. He learnt Amchi medicine and translated it into Tibetan script with the help of Acharya Chanda Dev. It was later brought to Tibet.

The Amchis possess not only the theoretical texts but also practical experience handed over from generation to generation. They also have a reputation of having high ethical standards in social system of Ladakh. Amchi medical system has accumulated a huge literature in course of time and Amchis of great fame and reputation were very popular among people. Their contributions to the system are immense. The therapy under Amchi system is divided into the following modes of treatment.

i) Treatment by herbs

ii) Treatment by minerals

iii) Treatment by animal organs (Organo therapy)

iv) Treatment by spring and mineral waters

v) Treatment by moxibustion

vi) Treatment by vein-puncturing

vii) Treatment by mysticism and spiritual powers (*Yantra Mantra*).

Lord Buddha had expounded his teachings on medicine in *Vinaya-Chikitsa Sutra* and since then this system of medical science had been fully developed in India by the zealous work of eminent Indian physicians like Kumara Jiva, Nagarjuna, Arya Deva and Shanta Deva . In the 5th century two Indian doctors Bc-byi-dgat and Lha Dagad mdzes went to Tibet and taught the basics of Amchi medicine in 629 A.D.

This system was later improved and upgraded to a full-fledged system by celebrated and learned physicians like Yuthog Yontan Ganbo tangtipa, Zurkharwar Changpa Namgailk and Sde-Shet ganges Gyatso. Under their personal initiative, dedication and untiring efforts a great number of rare medical authoritative texts, treatises and manuscripts were written and compiled. Amchi system is prevalent in many countries like Mongolia, China, Tibet, Bhutan and also in the trans-Himalayan region of India. The Chinese occupation of Tibet and the severance of emotional and cultural links between Ladakh and Tibet caused a severe set back to the continuity of religion, culture and medicial heritage of this region.

Today, there are about 350 Amchis in Ladakh who practice their art and science in treating the ailing among the population and this clearly indicates the fact that the doctor to population ratio in this region is about 1:580 which is very good compared to most other parts of India excluding allopathic doctors who are practicing in Ladakh. The Amchi system of medicine enjoys the confidence of the people of Ladakh both in Leh and Kargil districts. Amchi medicine is also used in the veterinary

field. Thus, people in the Ladakh and surrounding areas feel that the indigenous Amchi system of medicine needs to be promoted and protected in the interest of both for the medical needs of the population as well as for retaining a vital part of Ladakhi cultural tradition.

The Amchi Research Unit (ARU) was established by Government of India in Leh during 1976, under Central Council for Research in Ayurveda and Siddha, Ministry of Health and Family Welfare. The ARU has done a considerable work in the research of the Amchi system of medicine and produced several publications. The Amchi system recognises eight kinds of diseases and uses about 376 different formulations for the cure[67].

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[67]**Amchi System of Medicine – A Research Profile**, Central Council for Research in Ayurveda and Siddha, Government of India, New Delhi. p. 2 and pp.22-28.

CHAPTER IV

History of the Development of Indigenous Medicines in Tamil Nadu

The traditional medicines of India have a long history. As these practices were confined to certain groups of people over years, their development on a national level faced many problems. In the name of secrecy, many treatment methodologies and drug preparations were not revealed to outsiders. Invasion of the country by the foreigners and infighting among the local kingdoms restricted their growth to a larger extent. The final hammer came in the form of modern medicine introduced by the westerners, which was widely recognized and accepted by the local population.

Many attempts were made to develop the indigenous systems of medicines in various parts of the country during different periods of time. But there are no authentic records in support of them. According to the available records, in 1827, Ayurvedic course was started in the Government Sanskrit College, Calcutta as an attempt to preserve and propagate this ancient art of healing along with Unani Medicine in the *Madarasah*. But the East India Company was not satisfied with the work done and on the report of a committee in 1833; they decided to stop these classes and started Western Medicine in the Calcutta medical College[1].

In order to have a detailed study, India can be better divided into North, Middle and South instead of North and South as is usually done by many. The Vindyas and the forests in the North and the southern fringe of the *Deccan* plateau in the south are the two lines, which cut India into three parts. The third part in the South is Tamilagam,

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[1]**Report of the Committee on Indigenous systems of Medicine**. Vol. I. Report and Recommendations, Ministry of Health, Govt. of India, 1948. p.4.

which is the small in area. Tamil Nadu as a geographical unit and as understood by the makers of the earliest stratum of literature lies to the south of 15° latitude and does not have the modern distinction of Tamil Nadu and Kerala.

Nature had been merciful to the Tamil State. It had provided the Tamil country with some unique natural products, which have been in great demand in foreign markets such as pepper, pearl, ivory, cloves, sandalwood, teak, rosewood and some gems like corundum. In fact teak, sandal and corundum are from the Tamil words *Tekku*, *Sandanam* and *Kurundam* respectively. The export of rice to ancient Mesopotamia en-route Greece is proved by the occurrence of the word *Oruza* in Greek presumably from the Tamil *Arisi*, Cheetah from *Siruttai* and *Tuchi* in Hebrew meaning peacock-feather from the Tamil *Tohai* are the well known instances of verbal mobility indicating ancient commercial contacts between Tamil Nadu and the Middle East. The pearl fisheries of 'Korkai' on the southwestern coast were famous for their marine potentials.

The pre-historic period in the history of any region is related to the pre-documented period. There are no means of determining the nature of the people who inhabited Tamil Nadu in the Paleolithic period except with the help of some stone tools used by them. This age could well be a millennium before 6000 B.C.

The first hand historical reference to the Tamil Kingdom occurs in the rock edicts of Ashoka. The reign of Bindusara who conquered South India down to the northern fringes of Mysore introduced the Tamil Country to the north for the first time. A few reference to Tamil Nadu especially Kumari, Madurai and Rameswaram occur in Ramayana and Mahabharata the great epics of India. The uncertain date of these epics makes references to Madurai for a matrimonial alliance with a Pandya princess. The

Mahabharatha points out that Arjuna speaks of' *Pandyakavataka* of the Tamil region. The Ramayana indicates one of the earlier phases of Aryan expansion in the south and the ashrams of the Aryan *rishis* in the forests to the south of the Vindyas.

There are certain legends, which are intrinsically associated with the proto-history of the Tamils. Sage Agathiar is the central figure of these traditions. He is mentioned as a Vedic seer. Tamil legends claim him as the father of Tamil letters and the author of a no-longer existent grammatical master-piece *Agathiyam* and treat him as the guru of *Tholkappiyan* an author of great Tamil Grammar work "Tholkappiyam". Further, sage Agathiar is said to have been the author of many works on medicine, astrology and other miscellaneous lore.

The Tamils ultimately adopted Agathiar as almost their patron saint and considered him as the father of Tamil language and literature, while there is a fundamental difference of opinion with regard to the historicity of Agathiar. Some scholars assign a Vedic origin to him and still others a non-Aryan origin. But the Tamil legends beginning with the commentary on the *Iraiyanar Kalaviyal* make him the Chief poet of the first Tamil Sangam. It is noteworthy that there are no direct references to Agathiar in the Tamil Sangam literature.

Pandit Jawaharlal Nehru in his book entitled 'The Discovery of India' mentions that 'the Aryan migrations are supposed to have taken place about a thousand years after the Indus Valley period and that the first great cultural synthesis and fusion took place between the incoming Aryans and the already existing Dravidians, who were probably the representative of the Indus Valley Civilization.

He also sums up that '*it is quite possible and even probable that their culture (Mohen-ja-daro and Harappa) was indigenous culture and its roots and off shoots may*

be found even in Southern India and that some scholars find an essential similarity between these people of the Dravidian race and culture of South India' [2].

The Tamils as a race led a glorious life and excelled in many fields like the Aryans. The areas the Tamils mastered were sixty-four in numbers, which include Art,Architecture, Music, Painting, Dance, Astronomy, Astrology, Agriculture, Mathematics, Chemistry, Medicine etc. In the field of medicine, the Tamils were on par with the Greeks and due to their business contacts with the latter many drugs and treatment methodologies were exchanged between them. The earlier medical system of the Tamils was called only by the name 'Tamil Medicine' which later assumed the name 'Siddha Medicine'. In fact the term 'Siddha' denotes the science the Tamils followed over years and medicine is a part of it. The early beginning of the medical system was based on Alchemy.

The Siddhars who were the pioneers in Alchemy, Yoga, Philosophy and Medicine developed a perfect medical science based on their continuous researches. Their attempts to make all the metals into gold gave them deep insight into the use of metals as drugs to treat some serious diseases.

Though many historians feel that the exact date of the origin of the Tamil Medicine is difficult to assign, from the evidences advanced earlier, it can be said that it belongs to pre-Vedic period. The details of Tamil medicine are available only after the Sangam age, which is said to be either from the 6^{th} century B.C. or from 1^{st} century A.D .

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[2]A. Shanmugavelan, **Siddhar's Science of Longevity and Kalpa Medicine of India**. Govt. Branch Press, Pudukkottai, Second Edition, 1992. pp 6-7.

Developments in Ancient period.

Archaeological evidences show that the ancient rulers have encouraged and patronised the physicians by offering lands and other perquisites which is inferred through various inscriptions. Pallava ruler Nandivarman has donated one share in a village named *Kumaramangala Vellattu* to the physicians while another king Vijayanandi Vikrama Varman donated two shares to them. Parantaka Cholan gifted lands to several B*rahmanas*, which is recorded in the inscription of 1117 A.D; among them were astrologers, pauranikars, physicians and village servants including barbers who were attending minor surgeries. In addition, a grant was given to well known doctor *Pravarabhisaja* called Amibulattadi Bhatta[3].

In the Chidambaram temple, an inscription of the 13^{th} century gives a list of grants offered to different institutions and communities namely *Vaidyar*, *Jatyambashtha*, barber-surgeon and mid-wives. During 1264 A.D., the king Sundarapandyadevan had gifted an *Agraharam* to the *Brahmanas*. Two medical practitioners among them received one and three fourth share and a barber one eighth. Another inscription mentions about one share gift to *Vaidyabhoga* in order to encourage medical practice[4].

A great physician named Chenankoyil gifted 100 sheep to a temple for its maintenance, which exhibits the possession of wealth by the medical practitioners in those days. Ayan Uttama Cholan was a barber-surgeon and received a gift of one *Veli* and 4 *Ma* of land and a house at Vembarrur from the elder sister of the mighty Chola

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[3]Hulztech (Ed.), **South Indian Inscriptions**, Vol. II, Part 1-2, 1985, p. 364

[4]T. V. Mahalingam. **A Topographical list of Inscriptions in Tamil Nadu and Kerala.** Indian council for Historical Research. Vol. II. Delhi.1988. pp 42-43.

king, Rajaraja I for his surgical service known as *Salyakriyabhoga*. The Uttiramerur inscription in the erstwhile Chingleput district refers to the appointment of a physician for a group of villages and the land donated to him which was called *Visaharanabhoga*[5].

In the ancient and medieval periods, the temples were the centers of learning as well as dispensaries and hospitals. During the medieval period, the difference in the social living of the rich and poor was much less. So the rich had to seek distinction by their services to the temples and *madams* (Mutts) by establishing schools and hospitals. Thiruvavaduthurai inscription of Vikrama Chola dating back to 1121 A.D. refers to a medical school consisting of students of medicine, grammar and learners of Vagbhatta's *Astangahrudaya* and *Charaka Samhita*. Parakesarivarman sold his land for the maintenance of a free dispensary and a house-site for looking after a hospital called *Sundarachola Vinnagam Aturasalai* at Thanjavur. Tax remission was also given to these lands, which were maintaining hospitals. Princess Kundavai Nachiar the elder sister of the might Chola king Rajaraja I had established a free dispensary in the name of her father *Sundara Chola*. A total of 70 *Kaasu* was paid for the purchase of land for the hospital[6].

From the inscriptions of Thirumukkoodal in the erstwhile Chengalpattu district, which is considered to be one of the largest inscriptions, detailed information about the hospital administration in Medieval Tamil Nadu has been obtained.

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[5]**The Hindu**, 1-31st May, 1994. p. 27.

[6]**Annual Reports on Indian Epigraphy 1922-1925,** The Director General Archaeological Survey of India. New Delhi, 1986, p. 102.

The record of the king Veerarajendra furnishes information about the hospitals, their upkeep, medicines stored, number of beds, endowments offered for the maintenance of the staff consisting of physicians, surgeons, nurses and pharmacists and also for provision for lower staff like water-men. The sick were provided with a ration of one *nali* of rice per head per day. Apart from this, nearly twenty medicines such as *Brahmaya rasayana, Gomutra haritaki, Vasa haritaki, Dasamula haritaki, Bhallataka haritaki, Gandira, Balakeranda taila, Pancaka taila, Lasunadiyeranda taila, Uttamakaranadi taila, Sukla ghrta, Bilvadi ghrta, Mandukara vatika, Dravatti, Vimala, Sunetri, Tamradi, Vajrakalpa, Kalpakalaranga* and *Puraga ghrta* are mentioned in this inscription[7].

The inscription also mentions that there were 60 students in the Vedic school. The servants had to fetch medicinal herbs and firewood and had to attend to the patients and administer medicines. Among the medicines stored, some have a mention in *Ashtaanga Hrudaya, Charaka Samhita, Yogaratnakara, Vrundamadhava* and *Sahasrayoga*. The *Vyakarana* scholars were paid more than the physicians and the surgeon was paid one-third of the paddy paid to the physicians.

Besides the paddy, some gold coins and lands were also paid to the medical men and other para-medical staff in recognition of their services and standing in the field.

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[7]B. Rama Rao. 'Interesting aspects of Health care in Tamil Nadu History' **Studies in History of Medicine and Science.** Hakeem Abdul Hammed. (ed.) New Delhi. 1995-96. vol. 14: 1-2.

The following Table shows one such detail found in the Thirumukkoodal inscriptions.

Staff	Paddy (*Kalams*)	Gold coin	Land Gift
Physician	90	8	offered
Surgeon	80	2	-
Servants (2)	60	2	-
Nurses (2)	30	½	-
Barber	15	-	-
Water-man	15	-	-

A copper plate inscription dated 866 A.D. informs that Kokkaruhandakkan of Ay dynasty consecrated a temple at Pathivasekharapuram and established there a free boarding and lodging and arranged tuition for 90 students among whom a few were students of medicine[8].

Tamils, right from ancient times had given much importance to their health and to the medical practitioners. The name of the presiding deity of the saivite temple in Thiruvanmiyur in Chennai (Madras) is Marundeeswarar and Aushadhisvara meaning the God of medicines. Rajendhra Chola (1011-1043 A.D.) visited this temple many times during his lifetime. The local legends attribute the origin of the temple to sage Valmiki and Lord Krishna[9]. Similarly, Lord Vaidyanatha or Vaidheeswarar in Vaidheeswaran Kovil near Chidambaram is considered as the God of medicine and

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[8]S. Pratap Singh, 'Kanyakumari temple'. S. V. Subramanian and G. Rajendran. (Eds.) **Heritage of Tamils Temple Arts,** International Institute of Tamil Studies, Madras.1985.

[9]**The Hindu,** 1-31st July, 1990. p.21.

Great lord of medical practitioners. It is strongly believed that a visit to this place for the worship of the Lord Vaidheeswara relieves persons from their incurable diseases. To such an extent the Tamils had attached that much importance and reverence to the field of medicine right from ancient times.

The Nayakas and the Marathas during their rule over the parts of Tamil Nadu promoted medical science. There were 5783 villages in the Maratha principality of Thanjavur and each village had a hereditary physician who enjoyed a share in the harvest of the village of one and half acre of wet land as a gift. Margasahaya Panditar was a physician who received a gift of 6 Panam and 150 Kuli of land from Sonadi Ayyar, the agent of the ruler Raghunatha Nayakar during 1616 A.D.

The accounts of King Shahji (1684-1712 A.D.) reveal that Shahji constructed a hospital and employed physicians from Hyderabad and even Arabia. There were free rest houses shelters called '*Chattirams*' (Choultries). During the reign of the King Serfoji (1798-1832 A.D.), the medical science was cultivated with much care and the medicines of high efficacy were prepared in the palace itself at a huge cost. He executed a water supply system for Thanjavur town by laying under-ground pipes. He opened Dhanvantri Mahal and appointed more than a dozen scholarly physicians for rendering medical services and also for collecting formulations, which are preserved in the Saraswathi Mahal Library in the palace campus of Thanjavur even today.

King Serfoji took keen interest in the preservation and propagation of indigenous medicines and conducted conferences of traditional medical experts often in his palace. He collected a lot of indigenous formulations from various sources and published them as '*Sarabendra Vaidya Muraigal*' on various aspects of medical


COLLECTION OF
CUDJAN LEAVES
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science. These collections are in the printed form and are available at the Saraswathi Mahal Library, Thanjavur[10].

He evinced a special interest on Ophthalmology and conducted medical camps to detect eye diseases with the help of experts. The magic of the cataract operation has always been associated with opthalamic giants Jacob de Wenzel, Jonathan Wathen, Antonio Scarpa and Karl Himly. The bravest of them, Dr. Jacques Daviel, took the medical world by storm when he presented his findings to the French Academy of Surgery in 1752. Rajah Serfoji II (1722-1822) a deposed prince of the Maratha dynasty in the South city of Thanjavur in Tamil Nadu was a pioneer in practicing indigenous medicine. In fact his diagnosis and administration of medicine were very much beneficial to men and animals like horse and elephants.

A descendant of Chattrapathi Shivaji and one-time ruler of the kingdom of Tanjore, this scion of a warrior dynasty became an ardent champion of the arts, education and healthcare. When the British forced him to give up his throne in 1799, Serfoji turned the crisis into an opportunity by seeking the privilege to manage temples and choultries in the kingdom. By promoting social, cultural, health care and educational activities on an unparalleled scale, he accomplished much more than what he would ever have done with just a title of a ruler.

The villagers in the Tamil region also were ever grateful to the medical practitioners by giving them vegetables, milk etc., The medical practitioners boasted of secret knowledge from the palm-leaf book heirloom and quoted verses ostensibly from it to impress upon his client, before he proceeded to give the remedy for a stipulated

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[10]K. R. Krishnan, Siddha Medicine during the period of Marrattias, S. V. Subramanian and V. R. Madhavan. (Eds.) **Hertiage of Tamils Siddha Medicine,** International Institute of Tamils studies Madras.pp.60-63.

fee. Some of the Tamil physicians of the period gained considerable reputation and they were quite often invited to treat the wealthy from far off places. The English East India Company in the initial stages employed these native doctors for its Indian troops[11].

Nucleus of Medical care

The Dhanvanthri Mahal, a medical research centre dedicated to the research and practice of the alternate systems of medicine such as Siddha, Unani and Ayurveda became the nucleus of medical care in the Thanjavur. The ruler dispensed medicine in the *Aushadha Kothadi* (pharmaceutical godown) and gave instruction to scholars to document prevalent health disorders and the follow up with these medical practices. The result was the scholarly treatise Sarabendra *Vaidya Muraigal* that dealt with, among other things, diseases of the eye. Rajah Serfoji was known to carry boxes of medicines and surgical appliances with him even when he went on pilgrimage to Kashi (Benares). He not only treated various diseases, but also practiced surgery.

The successful removal of the cataract by the couching method that he advocated and practiced as early as in the 18th century was perhaps as stunning an achievement as those of his British and European counterparts of that era. But, Serfoji II never stepped on the world stage. His achievements were confined to books and manuscripts and paintings and now preserved by his descendants in the Saraswathi Mahal Library in Thanjavur.

In September 2003, a meeting between Dr. Badrinath and Babaji Rajah Bhonsle, current Prince of Thanjavur and descendant of King Serfoji II, revealed the existence of 200 year old manuscripts in the Saraswathi Mahal Library containing

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[11]ibid, pp.55-56.

records of the eye operations conducted by Prince Serfoji II. In March 2004, archaeologist Dr. R. Nagasswami and the photographer examined the records in the Saraswathi Mahal where the former prince conducted his operations and they have a high praise for such services[12].

Indigenous medicines during the British rule in India

In the first half of the 16th century little was known in Europe about tropical diseases. The first known European writer on the subject was Garciad'orta of Portugal, the most distinguished European physician of the East in the 16th century.

His '*Coloquios dos simple edrogas he cousas medicinais da India*'or 'Colloquies on the drugs of India' printed in Goa in 1563, was the earliest medical book on medicine of India and the third book printed in the country besides being the first European work on tropical medicine.

Among the prominent members of the Portuguese community, there was much praise for Indian physicians, who acquired great recognition by their successful cures and they were granted special privileges. There was clearly a good deal of interchange of medical ideas among these people[13].

The most distinguished Dutch physician in the East in the 17th century was Jacobus Bontius (1592-1631) who studied the local plants and their medical properties and added many new drugs to the pharmacopoeia, extolling the herbal knowledge of the local women. When he himself fell ill, he rather trusted the local drugs and treatment. The early traders to India faced formidable medical problems at first and were eager to learn anything from the local medical practitioners.

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[12]**The Hindu,** Magazine, 10th October, 2004. p.2

[13]G. Jan Meulenbeld, Dominic Wujastyk and Egbert Forsten (Eds.), **Studies on Indian Medical History**, Gromingen, 1987. pp. 120-121.

John Marshall (1668-1677) gave an accurate account of *Hindu Medicine*, which he had learnt from local practitioners in Patna. The early trading posts of foreigners were often short of surgeons, who died as often as their patients and it took at least a year before a replacement could arrive from Europe. This shortage led to the employment of Indian physicians wherever necessary and this became the official policy of the English East India Company in the first half of the 17th century[14].

Many German missionaries also came to India during the early 18th century. They were affected by the heat of this country and quite a few of them died due to this. But the missionaries who came later were able to manage the heat and were cured by the native Tamil medical practitioners. This must have created a greater curiosity among the Germans to know more about the native medical secrets. Some of the medical missionaries collected botanical specimens of the herbs and sent them to Halle most probably for the German medical practitioners to find out if those plants could be grown in Europe and medicines prepared for the future missionaries to carry with them, when they set sail to Tranquebar in Thanjavur district. Karl Graul, one of the missionaries took with him two native works on medical literature. 1.'Malika Sangalitam', translated from Telugu into English containing Tamil names of the medicine and 2.'Sitter Aruda Nodi Chindu' containing information about poisonous creatures and curative medicines for their bites etc. It goes to the credit of J. E. Gruendler a German medical practitioner who collected, translated and sent the works of medicine to his country.

Ziegenbalg mentions about the ancient Tamil art of feeling the pulse of the patients. By properly placing the finger the native doctors said from which one of the

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[14]ibid, pp. 120-123.

three types of diseases the patients suffered. By merely seeing the colour of the skin and eyes the ancient Tamil medical practitioners said the severity of the diseases and the chances of survival of the patients. It will certainly be surprising to know that our ancient native practitioners conducted urine tests. He also says that examination of the motion, eyes and tongue of the patients was conducted by the physicians revealed the nature, condition and severity of the diseases. Based on all these the Tamil medical practitioners dispensed proper medicines prepared from herbs[15].

During the late 18^{th} and early 19^{th} centuries, there was a great interest among many Englishmen to learn the Indian History and Culture. Sir William Jones who was in Calcutta (1783-1794) learned with astonishment the antiquity of Indian culture, its science and medicine. Jones urged that there was a great deal to be learnt from the Indian medicine and that its herbs and drugs should be collected and studied. This was the first time of the start of the great botanical collections by the East India Company surgeons and others who included this knowledge into the Indian Pharmacopoeia. The publication of the gathered botanical knowledge and the correspondence between interested collectors led to the formation of the first medical societies and the publication of the first medical journals. It is with this view that the Botonical Survey of India was established in Calcutta in the year 1889. The cataract operation described by Susruta was regarded as worth studying by the company surgeons, with a view to training simple practitioners to carry out the procedure in areas where European skills were not available[16].

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[15]C. S. Mohanavelu. **Early German contributions to Tamil studies 1706-1945**. (unpublished Ph.D thesis in History) University of Madras, 1989. pp.190-198.

[16]G. Jan Meulenbeld, Dominic Wujastyk and Egbert Forsten(Eds.), Gromingen, **Op. cit.**, pp. 126-127.

This renewed interest in Indian medicine was part of a general feeling that such advanced state of Indian civilisation should not be interfered with and the Europeans should leave it undisturbed but try to learn what all possible from it. As part of this policy the East India Company set up, towards the end of the eighteenth century, colleges and medical schools for Indians to study the sciences, including medicine, in their vernaculars. Most of the teachers were from the Company's medical service. The course was for three years, with teaching in Sanskrit and Urdu and clinical training at the general hospitals.

During the first half of the nineteenth century, however, the drive for 'Westernization', both secular and religious, had been growing. The western medicine has been introduced with teaching in English. This was reinforced by the adoption of English as the official language of India in the year 1835. Increasing numbers of medical schools were then set up on western lines and in 1839 the first Indian students were graduated from the new Calcutta Medical School. The first Indian Universities were also founded in 1857. But there was a relative neglect of the teaching of science and the Indians complained that there were very limited facilities for independent research. After 1835, there was no official support for Indian medicine. Teaching of Indian medicine was once again confined to hereditary medical families. The middle and rich classes of Indians made increasing demands for modern medicine. The practitioners of Indian medicine were following the same lines as the classical authors of ancient times. But they were only responsible for the treatment of the greater part of the population, particularly in the rural areas. The poor preferred Indian medicine even though they often had to accept free treatment and attendance from Europeans. Between 1912 and 1917, a number of Medical Acts were formulated and Medical Councils were set up in various provinces to lay down qualifications for registration of

medical practitioners, which excluded traditional practitioners and made it illegal for a registered practitioner to be associated with Indian Medicines[17].

Development of Indigenous Medicines in Tamil Nadu

In Tamil Nadu, earnest attempts were made as late as in 1921 to revive the study of Siddha system of medicine and the First Siddha Conference was organised in the famous town of Tirunelveli under the distinguished presidentship of the late Rao Bahadur Poondi Appaswami Vandiar of the famous family of Thanjavur. Sixty-four Siddha physicians exhibited about 749 varieties of important medicines. The second conference of Siddha Medicine took place in 1923 in Madras under the presidentship of the late Dewan Bahadur L.D. Swamikannu Pillai who was a scholarly person. About 90 physicians exhibited about 1892 varieties of medicines and the third conference was held at Madurai in the year 1927 under the presidentship of Hon'ble Dewan Bahadur R. N. Arokiaswami Mudaliar who was the Minister for Public Health, Madras Government. All these conferences were held under the auspices of the Tamil Siddha Vaidya Sangam, Koilpatti, Tirunelveli district with its able and zealous secretary Swami Virudai Sivagnana Yogi at the helm of affairs[18].

At the national level, the question of the rehabilitation of indigenous medicines especially Ayurveda and the Unani systems again came to the fore. One of the first signs of this reaction was the inauguration of the All India Ayurveda Mahamandal and Vidyapeeta (now renamed as All India Ayurveda Congress) in the early years of the

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[17] Ibid. pp. 128-129.

[18] T. G. Ramamurthy Iyer, **The Gems of Siddha System.** Sri Vani Vilas Press, Erode. 1933. pp. 17-20.

20th century. Courses of study were planned and holding of examinations in Ayurveda was started. Some scholars took up the editing of the classical work and brought out editions based on original material with mixture of recent knowledge.

Provincial Governments too began to take interest in the revival of Indian Medicine. The Nagpur session of Indian National Congress in the year 1920, adopted a resolution saying that *'this Conference is of the opinion that having regard to the widely prevalent and generally accepted utility of Ayurvedic and Unani systems of medicine in India, earnest and definite efforts should be made by the people in this country to popularise them and the schools, colleges and hospitals must be chosen for instruction and the treatment should be started in accordance with the Indian system'*. Jawaharlal Nehru and Pandit Madan Mohan Malaviya supported this resolution among others[19].

During this period, Gandhiji inaugurated Ayurvedic and Unani *Dawakhana* (Clinic and Pharmacy) in Delhi and Pandit Madan Mohan Malaviya started a Teacher Training College for Ayurveda in Banaras (Uttar Pradesh). Several State governments followed the lead first by starting teaching and training institutions and appointing committees to suggest ways of strengthening Ayurveda and Unani in the health services of the states. In 1917, the then Government of Madras appointed Dr. Koman as the Chairman of One-man Commission to study the indigenous system of medicine[20].

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[19]**Report of the committee on Indigenous System of Medicine.** Vol-I. Report and Recommendations, Ministry of Health, Govt. of India. 1948. p.7.

[20]**Indian Systems of Medicine and Homoeopathy-National and State profiles.** Ministry of Health and Family Welfare, Govt. of India. 1988. p.4.

In 1919, the Madras Mahajana Sabha wrote to the Government of Madras about the importance of indigenous medicines and implementing them in the health care programmes. The objectives of their request were as follows:

a. Giving a sound vernacular indigenous medical education to the children of this country.
b. Affording cheap but good medical help to the public
c. Systematizing the existing indigenous medical help
d. Creating public opinion in these subjects.
e. Taking steps to establish schools in respective areas for teaching the Ayurvedic and Unani systems of medicine.
f. Maintaining medical registers to record about the practitioners of Ayurvedic and Unani systems.
g. Permitting the Municipalities and Taluk Boards to set apart a sum of Rs. 600 every year to award honorariums for Ayurvedic and Unani medical practitioners who maintained schools and dispensaries.
h. Setting apart a sum of Rs.20, 000 from the provincial funds to be distributed among hundred different important centers for the up-keep of libraries consisting of books relating to Ayurvedic, Unani, Agastyar traditional medicine and other systems prevailing in different localities.

The then Government of Madras sent this representation of Madras Mahajana Sabha to some experts for their opinion[21].

Mr. C. Krishna Reddy while giving his views said that his sympathies were with the movement since in the rural areas the people did not have any medical aid except

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[21]**G.O No. 89.** Local and Municipal (Leg.) Dept., Government of Madras, 13th Feb, 1919.

what was given by the quacks who had no formal training in the medical art. Dr. G. Srinivasa Murthi, a strong votary of indigenous medicines in spite of being a modern medical practitioner, appreciated it as an excellent idea and requested the government for manpower and funds to implement the scheme.

Mr. J. V. Ramaswami Naidu, the third expert said that the scheme was meant for the development and spreading of knowledge of indigenous medicines and hence it would have his support. In this connection, he also opined that the medical art practiced by Hindus consists not only of Ayurvedic system, the literature of which was in Sanskrit or its translation, but also of other systems which were used in the Dravidian country, the literature of which was mainly in Tamil written by sages like Agasthiar and Konganar. Even in Malabar and Kanara there were medical systems similar to Dravidian medicine.

Development of Indigenous Medicine in the twentieth century

In the beginning of the 20th century, there was a national awakening of all the arts and sciences and accumulated knowledge of India. Several national and Provincial Committees were formed to study the status of Indian Medicines and ways and means of developing it. The first investigation made in Madras Presidency by the then British government was by Doctor Koman[22]. He visited many districts and collected a lot of materials for investigation. His report contained seven annexures and covered the following points.

1. Notes on drugs and compounds used in the indigenous medicine should be investigated thoroughly,
2. Summary of the notes on medicines should be discussed in detail,

[22]**Report of the Committee of Indigenous system of Medicine**, Vol. I. Report and Recommendations. Ministry of Health, Govt. of India, 1948. pp. 4-7

3. The composition and the methods of preparations should be standardized,
4. Statement showing the diseases treated at the General Hospital with Ayurvedic medicines and the results should be maintained.
5. Chemical Examiner's report on analysis of drugs should be maintained.

For this purpose he has referred to many ancient medical treatises such as *Charaka Samhita*, *Susruta Samhita*, *Vagbhata's Astangahridaya* and *Madhava Nidana*. Apart from this, he also went through many Tamil literary works. These Tamil works or *Shastras* are said to be less shackled work of the mythological doctrines of the original Ayurveda, to contain a great number of formulae and show a minute attention to the discussion on morbid symptoms. But they had a belief in the existence of evil spirits and offered many peculiar practices and rules for averting their machinations.

In 1921, the Raja of Panagal, the then Chief Minister of Madras Presidency who was also in-charge of Public Health, appointed a committee under the Chairmanship of Sir Mohamed Usman to report on the question of recognition and encouragement to the indigenous systems of medicine in vogue in the State[23]. He wanted to popularise the systems of Ayurveda, Unani and Siddha among the people and make them flourishing and self-sustaining systems. He was also interested to establish medical centres to offer medical education to people on Indian systems of medicine. He further desired that adequate provision must be made not only for the efficient training in the subjects but also for the teaching of the essentials of whatever is valuable in Western Medicine. He gave equal importance to other systems of medicine and he was very particular

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[23]G.O. Ms. No.964, Public Health Department, Govt. of India, August 1921 and G.O. Ms. 1351, Public Health Department, Government of Madras, October 1931.

that all deserving persons irrespective of caste, creed and religion should be encouraged to take up studies on the systems of Indian and foreign medicine[24].

The Usman Committee submitted its report on February17, 1923 and the Government of Madras has taken the following actions based on its recommendations and accomplished the following[25]:

1. Established the Government School of Indian Medicine in Madras in 1925 to teach Ayurveda, Siddha and Unani besides the essentials of modern medicine.
2. Agreed to establish provincial rural dispensaries and Municipal and District Board dispensaries to be staffed by the Diploma holders of the above school.
3. Established in 1926, a Government Hospital of Indian Medicines attached to the school.
4. Instituted a post-graduate course in 1930 in Indian Medicine for the graduates of Western Medicine (F.I.M.- Fellow of Indian medicine) and a course in Modern Medicine for practitioners of pure Indian Medicine in Modern Medicine (A.L.I.M. - Associated Licentiate in Indian Medicine). The latter course was abolished in 1941 and the former course was renamed as A.I.M. (Associate in Indian Medicine) afterwards.
5. Constituted a Central Board of Indian Medicine to act as recommending authority to the Government for registration and supervision of pharmacies and teaching institutions.
6. Established a College of Indian Medicine in 1947.

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[24]N. Kandaswamy Pillai, **History of Siddha Medicine,** Government of Tamil Nadu, 1979, p.564.

[25]T.G.RamamurthyIyer, **Op. Cit.** pp.17-20

7. Gave Sanction for starting a research Institute in 1947.
8. Sanctioned 'Village Vaidyas Scheme' in February 1947.
9. Considered a draft bill governing the registration of practitioners of Indian Medicine.

Also, proposals were made to start a Central pharmacy with a herbarium close to the college of Indian Medicine at recurring expenditure of Rs.1,25,000 per annum(At that time, the District Boards of Vizakapatanam, Guntur, Nellore and Tanjore had Pharmacies of their own).

The Andhra University has resolved to recognise a course in Ayurveda for the B.A. Ayurveda Degree. The University of Madras also considered the question of affiliation of the Government College of Indian Medicine[26]. One of the terms of reference of the committee was the question 'whether a synthesis could be made of the three systems viz. Ayurveda, Unani and Modern medicine into one comprehensive system. The considered opinion of the Committee was that such a synthesis was eminently practicable and it should not be the admixture of science and philosophy, which might lead to the degeneration of the Indian Medicine. Also many of the eminent scientists have already agreed that science and the scientific methods were limited in their range[26]. In the meanwhile, the Government of India appointed the 'Health Survey and Development Committee' known as 'Bhore Committee' in the year 1923, to assess the condition of indigenous medicines in British India. It made a survey and gave report from the point of view of Western Medicine. The committee could not assess the real

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[26]**Report of the Committee on Indigenous Systems of Medicine,** Vol. I, Report and Recommendations, Ministry of Health, Government of India, 1948. pp. 31-32.

value of the traditional system of medicines of India. Many experts criticized the Bhore Committee report[27].

The Founding of Government Indian Medical School

Based on the recommendations of Usman Committee, the Government Indian Medical School was founded with Dr. G. Srinivasamurthi as its first Principal. It was formally opened by the then Governor of Madras, His Excellency Lord Goschen on 24th November 1924 in a rented building 'Thambu Villa' in Pantheon Road, Egmore, Madras. But the actual classes were started on the 6th of July, 1925 for the Diploma Course viz. Licentiate in Indian Medicine (L.I.M.). The syllabus and scheme of studies were so devised to be in consonance with the Usman Committee's objectives. The school consisted of three sections viz. Ayurveda, Unani and Siddha. The courses of instruction were extended over three years. The training given in the respective Indian systems was supplemented by a course in human anatomy and physiology according to the allopathic systems[28].

Within a year the school was shifted to a bigger building rented for the purpose at 'Hyde Park', Poonamalle High Road in Kilpauk. The outpatient and in-patient departments were opened on 1st July 1926 and 1st September 1926 respectively and the course was extended from three to four years[29]. As per prospectus of the school, the scope of the training given in the institution was widened and notified as follows:

'The School is intended to provide such a training to its students as will enable them to become competent practitioners of Indian Systems of Medicine with a good

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[27]ibid. p. 11

[28]**G.O. No. 1581,** Ms. Public Health Department, Government of Madras, 3rd November 1924.

[29]**G.O.No.2188,** Public Health Department, Government of Madras, 28th October, 1925.

working knowledge of the Western system also. It was with this objective in view, the provision has been made in this school not only for proper training of students in Ayurveda, Siddha and Unani but also for offering them courses in subjects like Modern Anatomy, Physiology and Surgery in all its branches including Midwifery and Ophthalmology. Provision has also been made as well for Herbarium, Museum, Library etc' [30].

The number of students to be admitted in each year was fixed as 120. A permanent building was provided for the school by the government by purchasing 'Hyde Park' which was earlier rented during the previous year[31]. An advisory committee for the school and an attached hospital were constituted during this year with Sir Mohammed Usman as the President.

In 1928, a committee was formed to compile standard books for Sidhha medicine. A special course for training candidates in Indian Medicine was started in which only qualified practitioners of Allopathic Medicine were admitted[32]. Among the other significant events during this year, the starting of a high proficiency a test in Ayurveda, Sidhha and Unani for those who passed L.I.M. and the opening of a herbarium for experimental and teaching purposes was a notable one[33]. In the next year, a hostel for women students and a training course for Compounders and Pharmacists in Indian Medicine were started.

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[30]**G.O.No.358,** Public Health Department, Government of Madras, 2nd March 1926.

[31]**G.O.No.2015,** Public Health Department, Government of Madras, 22nd October, 1926.

[32]**G.O. No. 984,** Public Health Department, Government of Madras, 4th May 1928.

[33]**G.O. No.921,** Public Health Department, Government of Madras, 5th April, 1929.

A Post-Graduate course for training Canditates in Allopathic Medicine (A.L.I.M.) was also started for the qualified practitioners of Indian Medicine. In 1933, the duration of the course of L.I.M. students was extended from four academic years to five and the final year was devoted to the special clinical training which is normally given to all apprentices attached to the various departments of the hospital[34].

The next three years constituted the period of retrenchment, when the number of approved schemes for the better working of the school and hospital were kept in abeyance. In the year 1933, the Advisory Committee constituted in 1927, was abolished and a governing body with the Collector of Madras as ex-officio President was formed[35].

During 1940's the Government appointed a second committee under the Chairmanship of Sir Mohammed Usman, who at that time was the Vice-Chancellor of the Madras University, to report the lines on which the curriculum of studies and methods of teaching and examination followed in the School of Indian Medicine could be improved or altered and also to suggest ways to improve the bed strength provided in the hospital attached to the School for clinical instruction[36]. The report of the committee was submitted in 1941. However, the Government considered only certain proposals of the Committee, which did not involve any fundamental change in the nature of the school[37].

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[34]**G.O. No Ms. No. 1351,** Public Health Department, Government of Madras, 17th October 1931.

[35]**G.O.No.328,** Public Health Department, Government of Madras, 14th February, 1935.

[36]**G.O.No.3088,** Public Health Department, Government of Madras, 18th May 1940.

[37]**G.O.No.5177,** Public Health Department, Government of Madras, 10th December, 1941.

In 1942, Dr. G. Srinivasamurthi retired from the Principal's post and Dr. P. V. Krishna Rao succeeded him. The work connected with the conduct of the Board Examinations hitherto attended to by the Principal was transferred to the Commissioner of Government Examinations who was also nominated as the President of the Board of Examiners of Indian Medicine. In accordance with the recommendations of the second Committee, the A.L.I.M. Course was abolished from the academic year 1942-43. With a view to providing more clinical materials to the students, the bed strength of the hospital attached to School was raised from 80 to 110[38]. During the years of the Second World War, there were no fundamental changes in the school. A portion of the school building (Eastern wing of the Panagal block) was commandeered for the location of an A.R.P.D (Allopathic Regional Pharmacy Department) and as a protection against air raid the patients admitted in tiled buildings were shifted to the remaining terraced portion of the main school building. This resulted in dislocation of work in the classes and the government had to construct three temporary tiled sheds, two for the classes and one for the increased bed strength of the hospital. At the end of 1944, Dr. P.V. Krishna Rao passed away and Dr. M. Parankusam was appointed as the Principal.

In 1946, the buildings taken over by the A.R.P. were handed back to the department. But the same could not be allotted for the use of the students, as they were required for the hospital use. The temporary sheds constructed were condemned and considerable difficulty was faced due to the increased number of students seeking admission in the hostel. To solve this problem the Wallajah Baugh main building till then used as residence by the Chief Engineer was later allotted to the department[39].

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[37]**G.O.No.732,** Public Health Department, Government of Madras, 27th February, 1942.

[39]N. Kandaswamy Pillai, **Op. cit.,** p.567.

Creation of Indian Medicine Department in Tamil Nadu

In the year 1946, the Congress Party took over the administration of the Madras Presidency and there was a change in the policy of the government towards the development of Indian Systems of Medicine The then Premier, Hon'ble Mr. T. Prakasam and the Public Health Minister Hon'ble Mrs. A. Rukmani Lakshmipathi took great interest to develop the indigenous medical systems. In the All India conference of the Health Ministers, which took place at Delhi in October 1946, as per the suggestion of Mrs. A. Rukmani Lakshmipathi the following resolutions were adopted.

a. As per the recommendations of the National Planning Committees adequate provision should be made in the centre as well as in the states to popularise the indigenous medical systems,
b. For research and for application of scientific methods in the investigation of the Indian Systems such as Ayurveda and Unani, they should be with reference to maintenance of health and prevention and cure of diseases,
c. Colleges and Schools for training for diploma and degree courses in Indian System of Medicine should be started,
d. The graduates of Western medicine courses can be admitted in the post-graduate courses of Indian systems of Medicine,
e. As recommended by the National Planning Committee, it was resolved, vide its resolution no.13, to absorb the practitioners of Indian Medicine into the State Health Organisation by giving them further scientific training wherever necessary.
f. The conference also adopted a resolution that in the Central Council and

Provincial Health Boards, the practitioners of Indian Medicine should be given due representation wherever possible[40].

An *ad hoc* Committee was appointed to devise ways and means for the encouragement of Indian Medicine. The Committee's report was considered by the Government and it was decided to reorganise the Department of Indian Medicine with a view to promoting higher studies for the dissemination of knowledge and to popularise these systems in conformity with the advances made in modern medical science. In order to help the government implementing this policy, the post of Special Officer for the re-organisation of the Department of Indian Medicine was created and Sir C. Narayanaswami Naidu, the retired Law Secretary to the Government of Mysore, who had much experience in the development of Indian Medicine, was appointed on an honorary basis with effect from 17th July 1946[41]. Soon after other developments took place. The Board of Studies on Indian Medicine was constituted as per the recommendations of the *ad hoc* committee and was asked by the government to consider and report on certain points regarding the teaching and curriculum to be followed in institutions of indigenous medicine[42]. The government with certain modifications accepted the recommendations of the board of studies on the syllabus and curriculum. In 1947, due to the efforts of Mrs.A Rukmani Lakshmipathi, the Minister for Health, Government of Madras, the school was upgraded into the College of Indian Medicine. It was also decided to start the college at Madras with a research department.

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[40]**Report and Recommendations of the Committee of Indigenous Systems of Medicine,** Vol. I and Vol. II, Ministry of Health, Government of India, 1948. p. 7.

[41]**G.O.No.20102,** Public Health Department, Government of Madras, 13th July, 1946.

[42]**G.O.No.2166,** Public Health Department, Government of Madras, 21st August 1946.

So, fresh admissions to the school were discontinued and arrangement was made to the continuance of the studies only to the students who have been already admitted in the school. After the completion of their course the school was abolished. The college then started functioning from July, 1964 with the first batch of students. The number of admissions to the College was restricted to 50 per year[43]. However, in the year 1948, the Government decided to revive the School of Indian Medicine in addition to the College to function from July of that year[44]. As per the same order, the government raised the bed strength of the hospital to 210 and provided additional clinical materials for the students sanctioned at a cost of Rupees One lakh besides erecting five temporary sheds (three for the hospital and two for the College as lecture halls). The ladies hostel, which was in the rented building, was also shifted to the new building.

In the year 1948, the Government of India constituted another committee under the Chairmanship of Col. R. N. Chopra. The committee recommended the adoption of modern scientific methods in the development of indigenous systems of medicine. The recommendations were published in 1948 and the Government of India accepted the report in broad terms. The Government of India once again appointed another Committee under the Chairmanship of Dr. C.G. Pandit to work on the creation of a Centre for research in the Ayurveda and Unani systems of medicine and to suggest ways and means of imparting instruction in them in the colleges of modern medicines as well[45].

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[43]**G.O. Ms. No.762,** Public Health Department, Government of Madras, 3rd March, 1947.

[44]**G.O.Ps.No.1777,** Public Health Department, Government of Madras, 28th May, 1948.

[45]N. Kandaswamy Pillai, **History of Siddha Medicine,** Government of Tamil Nadu, 1979, p.576.

In 1949, the post of Special Officer was abolished and a post of Honorary Director of Indian Medicine was created and a modern medical man Dr. M. R. Guruswami Mudaliar, M.D. was appointed to the above post. He was also designated as the Head of the Department of the Indian Medicine[46]. The government had also considered the question of affiliation of the College of Indigenous Medicine to the University of Madras. However, the University authorities did not agree to the incorporation of modern medicine in the syllabus but suggested creating a Bachelor of Indigenous Medicine (B.I.M.) degree at a later stage. For the existing programme, they decided that the college need not be affiliated to the university and that the students who successfully passed out of the college would be awarded the title of G.C.I.M.[47] (Graduate of the College of Indigenous Medicine).

In the year 1955, under the instruction of the Government of India, a fourth committee was appointed with Shri Dayashankar Trikamji Dave as the Chairman. It was asked to study and report on the question of establishing uniform standards in respect of education and regulations of practice of Vaidyas (traditional Hindu medical practitioners) Hakims(Muslim medical practitioner) and Homoeopaths. The committee submitted its report and recommended for the introduction of uniform standards of training and Post-Graduate instruction and research facilities in all the three systems[48]. In all these recommendations the mention of Siddha system was not found.

On the national level, following the Dave Committee, another committee under

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[46]**G.O. Ms. No. 2361,** Public Health Department, Government of Madras, 22nd June 1949.

[47]**G.O. Ms.No.1555,** Public Health Department, Government of Madras, 1st May 1950.

[48]**Siddha system of Medicine – A Profile and Focus on Research and Development,** Central Council for Research in Ayurveda and Siddha, New Delhi, 1986.

the Chairmanship of Dr. K. N. Udupa was formed in July 1958. Even in this Committee's report a separate consideration was not given to Siddha and Unani systems of medicines. The committee recommended only on the improvement of Ayurvedic system of medicine[49]. At this juncture as a turning point, it was thought that the integrated approach to the development of indigenous medicines was not workable and hence it was then decided to teach the Indian Systems of Medicine with affiliation to the University of Madras.

The courses that were framed did not have any subject of allopathic system on any level of teaching and training. Consequently, on the basis of the Metha Committee's report and with the approval of the University of Madras, the College of Indian Systems of Medicine to teach Siddha, Ayurveda and Unani medicines was started at Palayamkottai by the Government of Madras in November, 1964. The College was set to train the students for the B.I.M. (Bachelor of Indian Medicine) degree of five-year duration with internship. The number of students to be admitted every year was fixed as 65 (Siddha- 30, Ayurveda-20 and Unani-15). But as there were no takers for Ayurveda and Unani courses, the admissions were restricted to 40 seats only in Siddha Medicine. The B.I.M. course was conducted under the 'Faculty of Indian System of Medicine' constituted by the Madurai University from the academic year 1968-69[50].

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[49]N. Kandaswamy Pillai, **Op. Cit.**, pp.576-582.

[50]**G.O.No.2015**, Public Health Department, Government of Madras, 22nd November, 1966.

During the first and second five-year plans much attention was given to promote indigenous medicines. In this connection about fifty lakhs of rupees were spent during the First Five-Year Plan. A sum of rupees six crores was allotted in the Second Five-Year Plan period.with state wise allocations, so as to encourage them to take up the cause of indigenous medicines.

Later development of Siddha Medicine in Tamil Nadu

The development of Siddha medicine in Tamil Nadu owes its credit to the efforts of K. Anbazhagan during his tenure as a member of the Parliament (1967-'71). He was of the opinion that Siddha and Ayurveda should be developed on two different lines. It was during the Second World Tamil Conference in 1968, once again Siddha medical field came to limelight. It was C. N. Annadurai the Chief Minister of Tamil Nadu during 1967-69, who sowed the seed for the revival of Siddha Medicine in Tamil Nadu and later on it was nurtured by. K. Anbazhagan. Till such time, in the Government of India records, Siddha was always combined with Ayurveda and grants were sanctioned together and were allocated for both the systems at a time[51]. As there was no separate department anywhere for dealing with Siddha medicine alone, the grants were not utilized to the maximum for its development. Later as a Minister of Health in the State it was K. Anbazhagan who took extraordinary steps to popularise Siddha medicine. During his period, the practice of hereditary and traditionally trained practitioners of indigenous medicine was regulated through registration with the Central board of Indian Medicine specially created for this purpose by properly

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[51]S.S. Mohanavelu, 'Contribution of the Germans to the Siddha Medicine before 300 years'. Paper presented at M.G.R. Medical University, Chennai, 17th November 1990.

screening them in written and oral examinations. Nearly 20,000 practitioners were registered under this scheme. In continuation to this, a Siddha Scientific Development Committee was formed for publishing rare Siddha textbooks and for collection and preservation of cudjan leaves, which contained many rare methodologies and drug preparations. An allotment of Rs. 50, 000 per year was made by the State Government in addition to Rs. 2 lakhs given as grant by Arulmigu Dhandayudhapaniswamy Devasthanam, Palani for bringing out an encyclopaedia of Siddha system and publication of manuscripts. About twenty such books were printed and published during that period of the later half of the twentieth century[52].

In 1966, the Madurai Kamraj University started under graduate course in Siddha and a Post graduate course in 1972. At present the Siddha medical degrees are awarded by Dr. M.G.R Medical University, Chennai as all the medical colleges are affiliated to it. The degree in Siddha Medicine which was originally awarded as B.I.M (Bachelor in Indian Medicine) is now being awarded as B.S.M.S (Bachelor of Siddha Medicine and Surgery)[53].

Role of Central Government in the development of Indigenous Medicines

In 1969, the Central Council for Research in Indian Medicine and Homeopathy (CCRIMH) was established by the Government of India as a grant-in-aid autonomous organisation under the Ministry of Health, with the objective of evaluating and standardising the drugs used in the traditional medicines. India had periodically introduced legislations for the perpetuation of these systems of indigenous medicine.

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[52]Presidential Address by K. Anbazhagan, Seminar on Siddha Medicine, Tamil Nadu Dr. MGR Medical University, Madras. 17th November 1990.

[53]M. Mathiazhgan, **Siddha Maruthuvam** Vol. I: History, Tamil Developmental Studies, University of Madras, Chennai. 2003. pp. 1-5.

India is one of the nations of the world to encourage the traditional indigenous systems of medicines. In 1970, the Government of India has passed the Central Council of Indian Medicine (C.C.I.M.) Act for registering the practitioners in indigenous medicines and also for regulating their practice in order to have an effective control over the education in the undergraduate and post-graduate levels. In 1971, the Central Council of Indian Medicine was set up to regulate the standards of education and to control practice in the traditional systems. Since then the various systems of Indian Medicine viz. Ayurveda, Siddha, Unani, Homeopathy, Yoga and Naturopathy had been receiving official support and funds from the Central and State governments in line with modern medicine[54].

The Siddha system has been recognized as one of the three systems in the Indian Medicine Act. Representation has also been given in full for this system in the central body of the Central Council of Indian Medicine with seven members. These members can also take active part in the Executive, Education and Regulation committees. In addition, due representation was also given to members representing the Siddha system in the Drug and Technical Advisory Board to monitor the Drugs and Cosmetics Act and Rules of 1940.

The recognition of Siddha system by the Government of India came in one more form through the Central Council for Research in Indian Medicine and Homoeopathy, an autonomous body under the Ministry of Health and Family Planning which established the Central Research Institute for Siddha in Madras in the year 1975 for conducting scientific research on the fundamental principles of the system by

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[54]**An Overview of Ayurveda, Yoga and Naturopathy, Unani, Siddha & Homoeopathy in India**, Department of AYUSH, Government of India, New Delhi, 2002, pp. 9-10.

utilizing modern techniques with a view to findingt better and effective measures for the prevention and cure of various ailments. The research conducted in this institute is both at clinical and non-clinical levels. At present the institute has designed studies on four clinical conditions viz. *Vali Gunmam* (Pepic ulcer), *Putru Noi* (Cancer), *Manjal Kaamalai* (Jaundice) and *Grahani* (Malabrophin Syndrome). The institute has also taken up the study of drugs described in Siddha system, which are claimed to possess antiulcer, antifertility, antifungal, antipyretic, and other potentialities. The institute is maintaining a well-attended outpatient department besides a pharmacy section catering to the medical needs of the people by offering them all essential medicines for many of their diseases. The pharmacy section also prepares certain *Parpams* (calcined preparations) and *Chendoorams* (mercurial drugs) which are required for the chemical and biological analysis to standardize them. The other departments functioning at Central Research Institute (Siddha) are Phytochemistry, Pharmacology and Biochemistry. The pharmacological and toxicological investigations of various drugs used for clinical trials are done in various experimental models using rats, mice, guinea pigs and dogs. The biochemistry department is engaged in biochemical and pathological investigations relevant to the institute's chosen clinical conditions as well as to that of experimental studies conducted by the Pharmacology department[55].

In addition, the Government of India has also started Siddha Clinical Research Unit and Survey of Siddha Medicinal Plants Unit in the Government College of Indian Medicine (later renamed as Government Siddha Medical College) campus in Palayamkottai, Tirunelveli district. In 1995, Siddha Medicinal Plants Garden was

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[55]N. Kandaswamy Pillai. History of Siddha Medicine, **Op. Cit.**, pp.586-587.

developed in Mettur Dam area in the land provided by the Government of Tamil Nadu.

In order to highlight the glory of the Siddha system the Government of India has established the National Institute of Siddha in Tambaram, Chennai in the year 2005, which was inaugurated by the Hon'ble Prime Minister of India Dr. Manmohan Singh. The efforts taken by the present Union Minister of Health and Family Welfare, Government of India, Hon'ble Dr. Anbumani Ramadoss in establishing the National Institute of Siddha deserve a special mention[56].

National Health Policy

In 1983, the Government of India came up with a comprehensive health policy known as the 'National Health Policy, 1983' incorporating the rich and centuries old heritage of medical and health sciences. The policy outlines the vast infrastructure available in the Indian Systems of Medicine and Homoeopathy (ISM & H) for addressing the health care needs of the people that were under-utilized. The policy suggested that it was necessary to initiate measures to enable each of these different systems of medicine in the health care utilization to develop in accordance with its own genius. It further suggested that simultaneously, planned efforts should be made to integrate their services at the appropriate levels within specified areas of responsibility and functioning of overall health care delivery systems, especially with regard to preventive, promotive and public health objectives. The policy emphasised the need for a meaningful phased integration of Indian Systems of Medicines with modern medicine and also outlined the need to secure complete integration of all plans for health and human development, particularly

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[56]**The Hindu**, September 4, 2005. p. 1.

in agriculture and food products, rural development, education, social welfare, housing, water supply and sanitation.

In many places, the Indian Systems of Medicine and Homoeopathy continues to be an integral and important part of the lives of many people as a way of life. The Indian systems are fully justified in seeking the help of philosophy[57]. They can thus claim to be much more complete bodies of knowledge and potential systems in line with the modern trends in many ways. C. Rajagopalachari, when he was the Governor-General of India said, in his inaugural address of the Madras Medical College Association in July 1947[58], that

> *'evolving of such a unified system is not a task of inseparable difficulty. Western medicine, after all, represents a development of the ancient system of Ayurveda, which had been adopted by the Greeks and then through them by the Arabs, and later by the Europeans in accordance with the genius and needs of their own country. In effect the so called different schools are only progressive stages of the same science of healing pursued on the same lines of investigation and experiment'.*

It is by such words of encouragement and activities of the administrators that the traditional indigenous systems of medicines began to flourish in this land. Their vitality and potentials were also gradually understood by the people. With this governmental and people's support these systems contribute to the eradication of diseases and development of public health in this country.

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[57]**National Policy on Indian systems of Medicine and Homoeopathy**, Department of Indian Systems of Medicine and Homoeopathy, Ministry of Health and Family Welfare, Government of India, New Delhi, 2000. pp. 1-3.

[58]**Report of the Committee on Indigenous System of Medicine**. Vol. I. Report & Recommendations, Ministry of Health, Govt. of India. 1948. pp. 48-50.

Chapter – V

Traditional Medicine-Present Day Perspectives

Various indigenous systems of medicine originated in ancient times in different parts of the world reflecting the culture and tradition of the respective local people grew along with their civilizations. Over the years these medical practices which were fragmentary in the beginning took shape as perfect systems and were patronized by people, rulers and social reformers and in some cases by the invaders too. The medical men were given higher status in the society and were offered with facilities to do more and more research to develop new techniques to fight and eradicate diseases.

It was not easy in the developmental period to bring out these practices out of secrecy and magico-religious culture. But experts who studied the systems in detail found that they were built on strong scientific principles and have foreseen a bright future. Slowly these systems were transformed to perfect medical lores and showed indications for further research. Whenever a practitioner was encountered with a new disease, he had to use his intuition, observation and experience to bring out a new drug or a treatment to find remedy.

In search for new things, the traditional practitioners utilized the opportunities to go out, learn and interact with their counter-parts in other areas. They travelled with groups of traders who, in those days, had to travel long distances to exchange their commodities. These journeys enabled the traditional practitioners to study the flora, fauna and other natural materials which came handy for them to find new discoveries. Further, the traders also felt comfortable to have a practitioner in their team to ensure proper health when they were away from their home land on business for many days.

Also, their journey to far off countries by land and sea exposed them to new health practices which they learnt thoroughly and incorporated in their own system to enrich their Practices. For example, some historians pointed out the similarities between the medical systems of Greek and Roman medicine. This became possible due to the maritime trade between them for centuries for which records are available. It is to be published out here that these aliens took away from this land some of the medical wealth that the Tamils possessed in ancient times.

The interest and the active experiments of the scientists all over the world had triggered the global revival of indigenous and traditional systems of medicine for restoration of health and eradication of diseases. World Health Organization records that about 80% of world population relies on traditional Medicines.

At present, disappointed by the treatment provided by allopathic medicines, more people are turning towards alternative systems particularly in India. They are also aware of the side effects of the heavy antibiotic and toxic drugs.

Particularly, diabetes is a common chronic ailment for which patients depend on insulin to maintain the blood sugar level, whereas Siddha Medicine tackles this problem by correcting the function of pancreas, stimulating it to produce insulin in natural way. Siddha medicine doesn't react adversely with allopathy. The patient can take his allopathic medicine for diabetes along with the Siddha which only rejuvenates his pancreas. This makes people to move towards Siddha system because the diabetic patients are relieved from taking insulin regularly[1].

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[1]**The Indian Express**, 12th September 2000. p. 16.

Other chronic ailments like arthritis, bronchial problems, Psoriasis, ulcer are the common problems for which people seek the help of this system. Especially Psoriasis is a type of skin disease and a particular drug by name *'Sivanar Vembu', 'Choornam'* and *'Kuzhithailam'* are prescribed for this. *Sivanar Vembu thailam* is prescribed as external application and it has shown a better result. These have been proved by clinical trials. Apart from this, many chronic skin diseases are also treated effectively by the Siddha system[2].

For bronchial asthma, medicine from *'Musumusukkai', 'Thoothuvalai'* and *'karisalai'* plants are used. *Aloe vera* is another important medicinal plant which is widely used for medical purposes. The pulp extracted is used in shampoo to control the dandruff. When consumed raw it acts as a coolant, help to prevent constipation, relieves gastric problems, cures ulcer, uterus problems and leucorrhea and it checks the growth of intestinal worms and cures eye ailments[3].

In several ways the official health policies and national plans and programmes accorded to Siddha system the same status as enjoyed by the allopathic system. At present this system is well set to orient itself to modern scientific parameters.

In the present world, people prefer luxurious life with virtually little scope for physical work. The modern gadgets perform all types of jobs as the humans. Lack of physical activity and sedentary life style lead to various kinds of diseases. The

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[2]G.Thiagarajan. **"A Clinical study on psoriasis (Kalanjagapadai)"**. Paper presented in International Conference on the Role of Indian systems of medicine and Homeopathy in the 21st Century. Souvenir 2003. Commissionerate of Indian Medicine and Homeopathy, Govt. of Tamil Nadu, Chennai. p. 137.

[3]K. Panneer Selvam, **"Documentation (Indigenous Knowledge) of Aloe Vera Linn. used by indigenous people (Irular tribal Community) in Trichy district of Tamil Nadu"**. Paper presented in International Conference on the Role of Indian systems of medicine and Homeopathy in the 21st Century. Souvenir 2003. Commissionerate of Indian Medicine and Homeopathy, Govt. of Tamil Nadu, Chennai. p. 217.

diseases such as diabetes and hypertension once found only among the aged people are commonly found now among the younger generation. Many diseases unheard of some decades ago are common among the people today. Some ailments affect both young and old, a villager and a city dweller and a male and female. In the years to come it is estimated that some more new diseases may attack people due to environmental pollution and extensive use of artificial agents in food and beverages. Also many infections may become resistant to modern medicines as very strong modern medicines are administered now even for minor ailments. The women who have many roles to play in the modern society are worst affected in the present day life. It is found that the failure of adopting preventive measures to safeguard the health is the root cause for all the above maladies.

In olden days the women, especially the older generation in the household, took care of the welfare of the family in all aspects, be it food or medicine. The adage 'food is medicine and medicine is food' was followed scrupulously by the female members of the family with the result all individuals at home maintained a healthy life. But the modernization has taken a heavy toll of the ancient practices including the household medicines, which were the offshoots of indigenous medical practices. Life in the multi-storied buildings gives no scope for kitchen gardens, which once supplied the herbs needed for entire family for treating common diseases. The once very common 'Grandma's medicine'(*Paatti Vaidyam*) has given way to the highly toxic and at times costly modern medicines even for minor ailments such as , cough, cold or fever. Though warnings are given to people by the authorities against taking such drugs freely without the advice of the medical practitioners people give least attention to them.

It is pertinent here to point out that many modern drugs discovered with much fanfare for their curative properties are frequently withdrawn from use once their long term and short-term side effects are understood. Thus the era of penicillins and sulpha drugs have ended with the discovery of new classes of drugs and therapies. The public is getting conflicting reports on the drugs of modern medicine day in and day out over the media. But they continue to use them, as they believe that they are the only choice available to them. Further, for many serious diseases such as cancer, human immuno deficiency virus(HIV) etc, the widely popular modern medicine offers no remedy or cure. Hence, the magic word, 'Prevention' has come to stay in modern medicine.

Ironically, the indigenous medicines have been strongly advocating the same in their theory and practice over centuries. Right from the day of the birth of the child, the indigenous medicines start their role in one's life. Based on the place and time of birth of a person, his or her body constitutions are determined and aspects which affect the health are to be prevented or avoided to maintain healthy life. For such persons the immune system is triggered by use of natural foods and yoga practice. In such cases, even if they fall ill natural medicines such as herbs or herbal concoctions are prescribed to bring back the normal health.

Of late many nations which are scientifically and technologically advanced also started concentrating upon the preventive aspects rather than the curative approach in their health care programmes. This approach has given an impetus to many indigenous healthy practices all over the world.

Modern Medicine and Indigenous medical Practices

The advent of modern medicine also known as Allopathy had a serious impact on many indigenous medicines especially in the countries which were under the

British rule. The modern medicine due to its novel diagnostic techniques and potent drugs spread along the length and breadth of the globe very fast. It readily adopted many scientific developments in other areas of sciences for its growth. Hence, in the cities and big towns all over, the traditional medical systems were neglected by the people. Moreover, because of the secrecy in the treatment and use of the drugs, these systems did not go out of the families of the hereditary medical practitioners. For many questions raised by the public and allopathic researchers on the evidences for the effectiveness of traditional medicines, there was no proper answer from the hereditary practitioners. No wonder they were stamped as 'Unscientific' and the Practitioners were termed as 'Quacks'.

Modern medicine due to its open approach and transperance is able to define many diseases on the basis of scientific principles, causative organisms responsible for such diseases, their mechanism of action, the methodologies to be followed and drug therapy. Especially when there was outbreak of diseases such as Cholera, typhoid, malaria, Kala-azar, plague etc., the modern medicine played a vital role in checking the spread of the diseases as well as in bringing control. The complete eradication of small pox from India is a testimony to the utility and efficacy of modern medicine.

However, it must be pointed out here that nearly 75% of Indian rural population still depend on traditional medicines for their health care needs inspite of the popularity of the modern medicine. Many scientific institutions also evince much interest in understanding the therapeutic potential of our ancient systems of medicine. This, the union and State Governments have started realizing the importance of the merits of traditional health practices.

Role of Governments in the popularization of Indian Systems of Medicine

The Government of India started a separate section under a Joint Secretary to look into the matters related to Indian Systems of Medicine and Homoeopathy in the Ministry of Health and Family Welfare. In the year 1995 a separate Department of Indian Systems of Medicine & Homoeopathy also started functioning under the Union Health Ministry. This new department is presently called as the Department of Ayurveda, Yoga-Naturopathy, Unani, Siddha and Homoeopathy and in simpler form as Department of AYUSH. The research in the Indian Systems of Medicine was taken up in the right earnestness with the appointment of an Advisor to Government of India and the establishment of Central Council for Research in Indian Medicine and Homoeopathy in 1969. In 1978, this Council was split into four separate Councils one each for Ayurveda and Siddha, Unani Medicine, Yoga and Naturopathy and Homoeopathy. The Central Council for Research in Ayurveda and Siddha (CCRAS) an autonomous organization under the Department of AYUSH, Ministry of Health and Family Welfare, Government of India is at present engaged in developing independent and multi-dimensional research in various fundamental and applied aspects of Ayurveda[4].

Global Acceptance of Indian Systems of Medicine

Among traditional medicines of India, Ayurveda and Yoga are the most popular and well developed systems world wide. A lot of researches are being done not only in India but also in many other countries on various aspects of these systems.

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[4]**Anonymous, Indian Systems of Medicine and Homoeopathy in India**, Ministry of Health and Family Welfare, Govt. of India, New Delhi, 1998, p.5.

The White House commission on Complementary and Alternative Medicines (CAM) Policy has acknowledged Ayurveda in its final report dated the 22nd March 2002. In chapter 2 of the report, .Ayurvedic medicines have been duly cited as examples in the alternative health care system. The report has recommended strongly for research support to CAM. An Indo-U.S. Workshop on Traditional Systems of Medicines and Research has been organized jointly by National Centre for Complementary and Alternative Medicines (NCCAM) functioning under the National Institute of Health (NIH), U.S.A. and the Department of AYUSH during October 20-24, 2003 in New Delhi for identifying and formulating collaborative research proposals. Fifteen experts from U.S.A. and many experts from Indian systems of medicine deliberated upon the prospective research projects to be developed and submitted to the National Institute of Health, U.S.A and other International funding agencies for support. This workshop opened up new avenues in expanding future collaboration in the research on Indian Systems of Medicine and for subsequent recognition of these systems in U.S.A. and other countries.

An Ayurveda Research centre was proposed to be established in Russia and the exchange of visits of experts and scientists was also taken up by the Department of AYUSH. The treatment of victims of Nuclear Establishment disaster at Chernobyl with Ayurvedic medicines has attracted the attention of medical and scientific community in Russia. The Ministry of Health of the Republic of Hungary and the Ministry of Health and Family Welfare, Government of India in this connection had started the'Hungarian Ayurveda Medical Foundation' with the hope that these systems would strengthen the existing modern system of medicine. The South African Government also has taken keen interest in Ayurveda.

A delegation under the leadership of Union Minister of State for Health and Family Welfare participated in the 'Made in India' show at Johannesburg, South Africa during 18-21 July 2001. A seminar by AYUSH was organized for the benefit of the 'Nelson Mandela School of Medicine', which sought the help in getting teachers of Ayurveda to train the teaching staff and the students of their institution. The Government of U.K. had constituted a Select Committee of the House of Lords on Science and Technology and the system of Ayurveda was placed in category 3. After elaborate presentations made by the Indian delegation. The British department of health has constituted a Herbal Medicines Regulatory Working Group (HMRWG) to consider the possibility of enactment of a law to regulate drugs and practice in herbal medicines including Ayurveda.

AYUSH participated in the 5th International Congress on Traditional Asian Medicine held at Halle in Germany in August 2002, Armenia and Georgia during July 2003. WHO has recognized Ayurveda in its publication 'Traditional Medicine-Growing needs and Potential' May 2002 as one of the commonly used therapies and techniques with herbal medicines, manual therapies, spiritual therapies and exercises. It should be mentioned here that WHO has been strongly supporting Indian systems of Medicine. It has organised workshops to develop guidelines on Panchakarma, which is the most popular therapy of Ayurveda. Further, it has come out with a comprehensive traditional medicine strategy during 2002-2005, which duly addressed the Ayurveda system. The implementation strategy will lead to further promotion of Ayurveda at global level. In this connection The Secretary of AYUSH participated in the WHO Consultation on draft guidelines of Safety Monitoring and

Pharmacovigilance of Herbal medicines in Vancouver, Canada during 1-3 Feburary 2004.

The Department of AYUSH has made an effective impact among SAARC countries also and AYUSH has participated in many meetings of traditional Medicines in various European countries and it had always advocated the cause and efficiency of the traditional medicines[5].

Present Status of Indigenous Systems

The three major Indian systems of medicine-Ayurveda, Unani and Siddha have, since India's Independence been receiving considerable encouragement by both the central and State governments. The Tamil Nadu State Government has extended special patronage to the Siddha medicine. In Tamil Nadu there are over 100 Siddha hospitals and nearly 300 dispensaries, many of which are the wings of modern medical hospitals. Two medical colleges function exclusively for teaching Siddha medicine, with 50 beds in each and the total number of beds in the State for this indigenous system are over 1100.There are about 475 licensed pharmacies, one unit each for drug standardization, clinical research and rearing of medicinal plants, two for tribal health care, and one mobile clinical research unit. The number of registered practitioners in Siddha medicine is now over 1100[6].

The Tamil Nadu Government in the year 1969 established the Medicinal Chemistry Research Centre in Madras Medical College, Chennai. This centre was

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[5]**An Overview of Ayurveda Yoga and Naturopathy Unani and Siddha and Homoeopathy in India,** Dept. of AYUSH Ministry of Health and Family Welfare Govt. of India, New Delhi-110001. pp.105-109. www.indianmedicine.nic.in.

[6]B.V.Subbarayappa. **Siddha medicine: An overview**. The Lancet. Vol. 350. 1997. pp.1841-1844.

functioning under a temporary scheme till 1979 and was brought into regular establishment from 10.11.1979. The main objectives of the centre are;

- To investigate the chemical constituents of herbs used in Indian systems of medicines
- To investigate the herbs for the safety and Pharmocological actions.
- To undertake well organised clinical trials for establishing the therapeutic usefulness of traditional medicines.

The departments of Pharmacology and Medicine in Madras Medical College and Government General Hospital, Chennai are involved in this programme in collaboration with the Physicians of Government Arignar Anna hospital for Indian Medicine, Chennai. The research findings are periodically published in many scientific journals. The scientific basis for the use of various traditional medicines is established by the research contribution from this centre[7].

Private Siddha pharmaceutical units have been producing several medicines claiming that the medical formulations are based on traditional texts. But many such preparations have variations and, more often than not, have a veil of secrecy. In 1971, the Indian Government established a Central Council for Research in Indian Systems of Medicine, and in 1978 a standardized formulary for Siddha medicine was devised for 242 drugs in the preparation of which nearly 100 plants are involved, along with mercury, sulphur, arsenic, metals, gems, salts, shells, and several other organic and inorganic ingredients. The Indian Medical Practitioners Co-operative Pharmacy and

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[7]**G.O.MS.NO.1981**, Health and Family Welfare Dept, Govt. of Tamil Nadu, 10th November 1979.

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Year	Hospitals				Dispensaries			
	Govt.	Local Body	Others	Total	Govt.	Local Body	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1980	74	-	-	74	13	-	383	396
1981	76	-	-	76	15	-	412	427
1982	105	-	-	105	431	-	-	431
1983	105	-	-	105	242	-	2	244
1984	105	-	-	105	309	-	2	311
1985	105	-	-	105	314	-	2	316
1986	106	-	-	106	226	-	2	228
1987	105	-	-	105	235	-	2	237
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1989	107	-	-	107	304	-	2	306
1990	107	-	-	107	304	-	2	306
1991	108	-	-	108	308	-	2	310
1992	115	-	-	115	309	-	2	311
1993	115	-	-	115	321	-	2	323
1994	115	-	-	115	326	-	2	328
1995	119	-	-	119	327	-	2	329
1996	119	-	-	119	327	-	6	333
1997	152	-	-	152	343	-	-	343
1998	204	-	-	204	357	-	-	357
1999	224			224	363			363
2000	236			236	356			356
2001	237			237	352			352
2002	236	0	0	236	347	0	0	347
2003	272	0	4	276	399	0	0	399

Courtesy: AYUSH IN INDIA-2003, Planning & Evaluation Cell, Dept. of Ayush, Ministry of Health & Family Welfare, Govt. of India, New Delhi.

Stores, which was established in 1945 at Madras, had been actively engaged in the production of standardized drugs of the Ayurveda, Unani and Siddha systems. But rejuvenators, restoratives, and similar health-protective formulations of private Siddha pharmaceutical units still hold the fort among the few people of Tamil Nadu.

Due to the encouragement given by the Central and State governments the Siddha system had become more popular in recent years. This is quite manifest in recent developments. About 16,600 Siddha registered medical practitioners are providing health care to the public by the close of the last century. This system is being practiced in Tamil Nadu, Kerala, Pondicherry, Karnataka and Singapore.

From the statistical information it is found that the number of hospitals increased from 74 in 1980 to 273 in 2003 all over India. This clearly indicates the popularity gained by this system among the public in the last two decades. Because of the interest shown by the public, the government is also providing one out-patient unit in almost all the government hospitals (table 1)[8].

In order to update the education of Siddha system there is a separate education committee within the Central Council of Indian Medicine. This education committee deals with all matters pertaining to Siddha education such as curriculum and syllabus for under graduate and post graduate levels.

The increase in number of private colleges apart from the government colleges and the number of students joining the courses clearly show that the younger generation is also showing much interest in pursuing this system of medical

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[8]**Ayush in India-2003**, Planning & Evolution Cell, Department of Ayush, Ministry of Health and Family Welfare, Government of India, New Delhi, p. 56.

education. In order to make the diagnosis up to date, the medical practitioners are trained in pathology and are trained to conduct clinical tests similar to those of allopathy.

The Central Government's Siddha Research Unit located in Chennai has been engaged in clinical trials of some Siddha drugs that have traditional claims for curing peptic ulcer, amoebic dysentery, and hepatitis. Though initial results seem to be encouraging such trials are few and far in between. More rigorous scientific investigations are necessary if Siddha medicines are to join the mainstream of Indian medicine in which modern medicine or allopathy has been rightly playing a dominant part. The expensive treatment of the latter, however, even for minor ailments in the context of the poverty of a large section of people in Tamil Nadu is perhaps one of the reasons for the appeal that Siddha medicine is bound to continue for a long time as a healing tradition in the service of the common people of Tamil Nadu[9].

Prime Minister Dr. Manmohan Singh while inaugurating the National Institute of Siddha(NIS) in Chennai stressed on the need for developing and patenting modern manufacturing process, besides ensuring strict adherence to good manufacturing practices and standardization and quality control of Siddha Medicine. This NIS is a joint venture of the Centre and the State Government at Tambaram Sanatorium. He also said that in partnership with the Council for Scientific and Industrial Research, Indian Council for Medical Research, universities and with major pharmaceutical companies, the NIS would have to standardize frequently-used formulations. Dr. Singh said that the complementary role of various Indian Medicines must be explored

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[9]B.V. Subbarayappa. **Siddha medicine: An overview**. The Lancet. Vol. 350. 1997. pp.1841-1844.

and exploited to enrich every system by adopting the best therapies and formulations of other system. He further added that people can make them more broad based and effective in dealing with diseases. Referring to palm leaves of great antiquity, which contained invaluable medical formulations and provide deep insights into Siddha medicines he said 'If they are collected and digitalized and printed they will benefit future generations'. He also added that, 'Increasingly, mankind is turning to indigenous systems of medicines, which are holistic and which not only treat the disease but also prevent it'[10].

The increasing popularity of holistic systems of medicine in developed countries testified to their efficacy in dealing with complex health disorders of the modern world. This country is a treasure house of knowledge in the Siddha system of medicine and Dr. Singh stressed the need for contextualizing it. He also felt that the specialists in microbiology, biochemistry, anatomy, physiology and biotechnology could provide valuable support to take the holistic medicine forward. Referring to the progress made by Tamil Nadu in the direction of mainstreaming of Ayurveda, Siddha and Unani at the primary health care level, he said it should be tried in the National Rural Health Mission.

According to an opinion poll conducted by 'The Hindu' the national newspaper in Chennai, it is known that generally 11% of people between the age group of 18 and 45 are for home remedies for minor ailments and 55% consult a doctor whereas 31% of the people administer a medicine on their own or buying it from the pharmacy. Nearly 3% of them do not take any medicine at all.

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[10]**The Hindu**, 4th September 2004. p. 1.

Among the various systems of medicine prevailing in India 73% of the population believe in allopathy. About 11% of the population have faith in Ayurveda, 8% on Siddha, 7% on Homoeopathy and only 1% of the population consider Unani medicine as effective. On the whole the survey indicated that majority of the people, that is 80% follow the modern medicine, 6% follow Ayurveda 5% take homeopathy and 3% take Siddha medicine for their ailments[11]. This is certainly an appreciable trend when compared to their earlier states in 1947.

It is found from the survey made by the authorities concerned that people of all age groups now seek Siddha medicine. The main reason which makes them to adopt this system is that it has fewer side effects and it is economical. At present, people from all categories of economic background prefer this medicine. Patients who mainly suffer from skin diseases particularly Psoriasis, lung ailments, and joint disorders prefer this treatment. Many patients are of the opinion that the Government is not paying due attention in improving this system, though great potentials[12]. The announcement made by the Government for improving all types of traditional systems sounds loud but in actual practice it is yet to be fulfilled. One more view of the patients is that research must be conducted in this medicine to make the treatment much more advanced to produce quick results. As this system takes long durations to cure the diseases some people are reluctant to turn to this system. So they are not satisfied with prevailing conditions in the hospital, and they also do not want to be patients in the hospital for a longer period.

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[11]**The Hindu**, Metromonitor, 22nd June, 2004.

[12]Interview with painter Mr. Ganasen, Arigar Anna Government Hospital of Indian Medicine Campus, Chennai. 23rd November 2005.

When the doctors in this connection were interviewed they were also of the opinion that people of all age groups and all walks of life showed a tendency to prefer come for this treatment. Presently, people are aware of the side effects caused by the allopathic medicine. As more people talk about the usefulness and efficacy of natural products and the use of herbs for the cure of diseases some more are now slowly moving towards traditional medicines. Yoga and Meditation are being popularized all over the world. Apart from this, the doctors also feel that more medicinal plants, herbs must be cultivated for the preparation of medicines and for the eradication of diseases. It is also reiterated that all kinds of media must be used in proper way to promote this system among the people[13]. This situation is a sequel to the development of the strong belief of the people towards the efficacy and curative strength of the traditional and indigenous medicine.

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[13]Interview with Dr. K. S. Kalaimani, Research Officer, CRIS, Chennai, 23rd November 2005.

Conclusion

Indigenous medicine which was also known as Traditional medicine or Heriditary medicine had been a part of the cultural heritage of a country. The systems started and medicines procured from nature by men's continuous efforts on the basis of their intellectual acumen had become remedies to treat pain and sufferings caused by diseases. The treatment methodologies over the years developed into a systematic health care system incorporating the spiritual and mystic beliefs of the respective generations and cultures.

The traditional medicines have a long history. It started as 'religio-magico-remedies in the beginning as it was believed that the diseases were due to the curse of evil spirits on humans. The treatments initially were given by those who practiced sorcery. It took fairly a longtime to set free these medical practices from the clutches of such people.

As human civilization progressed and various cultures and traditions started mingling with each other these medical practices took different shapes. The task of attending to the medical needs of people was assigned to a particular group of people in the community who were given special status in the society. Their services were utilized not only by the common people but also by the rulers and administrators. To enrich their healing art they travelled extensively and gained knowledge about the life saving medicines from men of great intellect who were called Siddhars in the Tamil country. Their talents were passed on to the successive generations of their families and because of that these systems were known as 'hereditary medical practices'.

These types of practices developed during different periods of history in various parts of the globe and flourished in the respective lands. But due to lack of

patronage from the public as well as by the rulers, many traditional health practices have gone into oblivion. Thus, the world had lost some traditional wealth which had been in store for long in many countries. Fortunately, in some societies these traditions were preserved as a part of their rich heritage which once again had blossomed during the period of renaissance.

The Great civilizations such as Egyptian, Greek, Mesopotamian, Persian, Indian and Chinese had contributed a lot towards the field of medicine. The profound medical knowledge of Egyptians is known through the papyrus. The use of herbs for treatment, the surgical practices, the embalmment activities and filling the decayed teeth with cement of gold are some of the examples which stand testimony to their medical achievements. The medical system there was empirical rationalism with mysticism. The Greeks were in no way inferior to that of the Egyptians. It is hardly an exaggeration to say that modern medicine would not exist without the Greek precedent. Hippocrates the father of medicine belonged to this civilization. It is inspiring to note that he was the first person to apply a scientific observation that is in line with the present day diagnostic methods. Advancement in Pathology and postmortem done on deceased criminals are some of the land marks of their medical knowledge.

In Mesopotamian civilization the priest was considered as the physician. It is gleaned from the pages of history that they developed many medicines about 4000 years before. They viewed that the diseases were the punishments of God. Their Materia Medica included nearly 250 medicinal plants, 120 mineral substances and 180 animals and other products from nature. In the same way in the Persian

civilization also the priests were the physicians. The holy herb by name' Haoma' was profusely used by them for treating many of the diseases.

Many similarities found among these civilizations in the medical field were due to maritime contacts and also due to the curiosity of people of different cultures to learn new methods from others. As regards the Chinese, their medical literature is very vast. Shen Nung around 2700 B.C. was considered as the Father of Chinese medicine. The fact that more than 100 herbs and 70 different poisons were tested by the Chinese marks their extensive activities in the medical field. The Chinese system propounded that dual forces Yin and Yang act on man and the imbalance of these forces caused the diseases. Their treatment included acupuncture, moxibustion and massage in addition to many herbal medicines. All these clearly indicate that ancient people of these countries were well adept in the field of medicine.

In addition to these practices in these civilizations there were many folk medicines practiced by many tribes in various parts of the world like Zulus in Africa, Aboriginal Indians and Balinese in Indonesia. Though their diagnostic and treatment methods are considered unscientific, these medicines are still in practice among these communities since they have blind faith in these practices.

In the modern period Homoeopathy system of medicine was introduced by the German physician Dr.Hahnemann and it is based on the principle that 'like cures the like'(*similia Similibus curenter*). The main concept was that herbs or chemicals which induced the symptoms akin to a disease will be useful as a remedy for the same disease, if used in proper trituration and combination. It can be confidently stated that next to the modern system of medicine, homeopathy is the most popular and widely practiced system of medicine throughout the world.

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Courtesy: AYUSH IN INDIA-2003, Planning & Evaluation Cell, Dept. of Ayush, Ministry of Health & Family Welfare, Govt. of India, New Delhi.

It is to be pointed out that nearly sixty other types of alternative therapies and diseases treatment system are in vogue in different parts of the Globe. Notable among them are Aromatherapy, Auricular therapy, polari therapy, nutritional therapy, magneto therapy and colour therapy. The patronage offered to these practices and curative benefits the society derives from these systems indicate that they were also developed on the basis of some strong scientific experiments and beliefs.

In India, the traditional medical practices such as Ayurveda, Siddha and Unani had come a long way and become a part of the rich Indian culture. No society in the world can boast of such a traditional art as Indians once had. For example, in Tamil Nadu which is considered to be the cradle of human civilization, 64 such traditional arts had flourished. One such art is the medicine, known as the 'art of healing'. Ayurveda has its origin in the northern part of India and it made great strides and had become popular beyond the borders of the country. Ayurvedic practices, which include Panchakarma treatment, Yoga and meditation, are accepted in many countries not only for the treatment of diseases but also as methods of preventive care. The World Health Organisation (W.H.O) has recognised Ayurveda as one of the oldest traditional medical systems of the world and extends support for its growth and development. Further, in many medical institutions and universities around the world, research on various aspects of the traditional drugs and clinical trials are being carried on with financial support from agencies such as W.H.O and National Centre for Complementary and Alternative Medicines (NCCAM), New Delhi.

Likewise, the Unani system of medicine which has its origin in Greece and much developed later by Persians came to India along with the Mughlus. The support extended by various Mughul rulers and the spread of their power and culture

throughout India had helped the growth of the Unani medicine. It is accepted as one of the Indian Systems of Medicine having many hospitals and Colleges supported by the Government as well as by other educational trusts.

The Siddha medicine, a unique medical practice, confined to the South Indian territories such as Tamil Nadu and parts of Kerala, Karnataka and Andhra Pradesh has wealth of information on the treatment methodologies, drugs and related aspects. The Siddhars who were considered as the great sages in ancient times were the people who invented the medicinal aspects of herbs, plants, metals, minerals and animal products to cure the diseases. Their findings and experiments were compiled in medical treatises and they are the basic objects of information on the systems of Siddha and Ayurveda. The Siddha system particularly advocated ways for a healthy life for all and indicates remedies for all diseases. The uniqueness of this system can be seen not only in the wide use of metals and minerals including highly toxic trace elements such as mercury, arsenic etc in the treatment but also in some surgical methods adopted in this system. Some of the methods adopted in the administration of medicine and in surgery are the fore-runners of the techniques adopted today in the modern medical practices.

The use of 108 special materials as drugs known as "Kalpa Medicines" consisting of herbs, metals, minerals and animal products in strengthening the body and in treating several complicated diseases without using any toxic substance, has no comparison in any other medical practice.

Even though the traditional medical practices suffered a set back and heavy blow due to the invasion of modern medicine (Allopathy) the former still continues to serve the society to a sizable population especially in the rural areas all over the

country. The W.H.O. has reported that more than 70% of the populations of the developing countries still rely on Indigenous medicine or traditional medicine to treat different diseases. In India, the support for traditional medicines at the national level had been given by nationalists and people during the period of the Freedom Struggle as the contribution to the spirit of Swadeshi (Be Indian and use only Indian products) Movement. The Central and many State governments extended their helping hands only from 1960's by creating separate ministries and departments in the administrative level besides establishing many hospitals, clinics, pharmacies and educational institutions involving huge financial inputs. Several positions were also created at the governmental level for the traditional medical practitioners on par with their modern counterparts.

The Government of India has set up a national body 'Central Council of Indian Medicine (CCIM) to control and guide the institutions dealing with traditional medical education to ensure quality education throughout the country. On behalf of the Government of India the CCIM prescribes the curriculum for educational institutions and monitors their functioning. In addition, the Central government has set up research Councils for traditional medicines which take up clinical, statistical and drug research besides bringing out publications with information culled out from the ancient literature, mostly written on the fragile palm or cudjan leaves.

The importance of any subject or system of science is mainly gauged by the contribution that it had made to the society and to the development of other branches as well. Modern medicine adopts a few of the Indian traditional systems in the treatment of pain (morphine), bronchial asthma (atropine) and hypertension (reserpine). Similarly, the Chinese system of medicine has offered an effective cure

for Malaria (artimism) and gave a popular rejuvenator (ginseng) to modern therapists. The medical curriculum in China includes Chinese traditional systems in addition to modern concepts. Special efforts are made to understand the scientific basis of Chinese medicines by the co-ordinated team work of traditional medical practitioners and modern medical scientists. Such an integration and Co-operation had been emerging in recent years in India also. This is exemplified by the recent introduction of a few drugs such as blood cholesterol-lowering drug "Gugglipid" from traditional herb Gugglu, a drug for improving memory from a traditional herb "Brahmi", an effective herbal medicine for jaundice Liv52 extracted from the medicinal plant "*Keelanelli*" and many more drugs prepared on traditional methods from various herbs, plants, metals, minerals, animal products and from different natural products.

It is interesting to note that in recent decades there has been an enormous awareness among the people over health care aspects and this awakening led to the revival of indigenous and traditional systems of medicine in the global scenario. The World Health Organization studies reveal that considerable number of the world population today relies on traditional medicines. Though the modern medicine is effective, its side effects are serious. But the treatises on traditional medicines speak of the efficacious nature of traditional systems and assure a healthy life for those who follow such systems. The medical practitioners of these systems inculcate this faith in the minds of people and in this way these systems are becoming popular in recent years.

It is also to be pointed out that the Central and State Governments in India also advocate the effectiveness of these systems in fighting out diseases and in maintaining good health. National plans, diseases eradication programmes and health policies of

the government now give much focus on the traditional systems as a result this development in the later half of the twentieth century.

In recent decades, the Siddha, Ayurveda and Unani systems began to receive greater attention of the people. The younger generation also evinces great interest in pursuing this medical education. In Tamil Nadu, more number of hospitals and medical institutions of traditional medicines had been established to cater to the medical needs of the people. The people in turn throng to these medical centres for one or the other of their sufferings due to the diseases. The statistical information clearly reveals that considerable number of people began to develop much faith in the indigenous and traditional systems of medicine. This is not only because of the curative effects of the indigenous medicines in general and Siddha medicine in particular, but also due to the romantic feeling of the people of this region that they were the unique traditional medicines invented and introduced by great and saintly intellectuals of the glorious past.

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Mr. Sekar, Clerk ICF, Arignar Anna Government Hospital of Indian Medicine, Chennai. 23rd November 2005.

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APPENDIX I

QUESTIONNAIRE FOR SURVEY

1. Name of the Physician/Patient

2. Branch of Indigenous Medicine practicing/ Undergoing treatment.

3. Since How long:

4. Why people prefer this indigenous treatment /interest towards the system?

5. For what type of diseases people come for treatment / the patients choice of disease

6. What age group mostly prefers this branch of I.S.M.?

7. What economic group prefers this treatment?

8. What grievance/suggestions about the system of medicine?

9. What you expect Government/Public to do for the development of this system?

10. Any other information.

APPENDIX II

Sufferers sure of fish cure, pooh-poohs all criticism

TIMES NEWS NETWORK

Hyderabad: Rationalist groups may say it is unscientific and laboratory tests may show contents of steroids in the fish medicine, but asthma patients are not going to believe them.

Patients from Rajasthan, Uttar Pradesh, Chhattisgarh, Karnataka and other parts of the country have started pouring in at the Exhibition Grounds, the venue for administering fish medicine by Bathini brothers on *Mrigasira* day (Wednesday). By Tuesday evening, thousands of patients from outside the state had reached the venue.

Fifty-year-old Nagappa Kalishetty from Gulbarga has come with his family to take the medicine. He has taken the medicine twice and said his health has improved. "I used to get severe asthma attacks before taking the medicine. But now, I feel much better," he said.

Mewaram has a similar story. A stone polishing worker from Meerut in Uttar Pradesh, Mewaram said: "I was asked by doctors not to continue in the job as I used to wheeze at work. Following advice from my friends, I took two doses of the fish medicine. This is my third visit," he said.

U Kalawathy, 35, and her two-year-old daughter from Dharmavaram in Anantapur - both suffering from asthma - were among those who were camping at the venue. She expects to get cured with the last dose of medicine on Wednesday.

When informed about the controversy around the medicine, the patients said that it does not matter for them. "We could feel the difference. Why should we believe others," said Mewaram.

Times of India, June 8, 2005 (Hyderabad Edition)

APPENDIX III

Bathinis to file PIL over cure

By OUR CORRESPONDENT

Hyderabad, June 8: The Bathini Goud family is planning to file a public interest petition in the High Court stating that thousands of asthma patients would suffer if the administering of the fish medicine is stopped.

Mr Bathini Harinath Goud and other family members told this correspondent that the secret formula of the fish medicine could not be disclosed.

"How can we disclose it?" he asked. "For generations, we have been under an oath administered by a sage in 1845. Since then the family has been giving fish medicine to the people from our ancestral home in Doodh Bowli."

The family believes it is doing a public service.

"The medicine is administered free of cost," said Mr Harinath Goud. "We have never advertised or asked people to take the medicine. If people think their asthma is being cured by this treatment, they will continue to take it."

Mr T. Amarnath Goud, the counsel of the family, said he would soon file a counter PIL.

"We will abide by the court order. Whatever else has to be said will be said in the court," he told his correspondent.

Meanwhile, amid high drama and altercations, about 20 samples of the fish medicine were collected by officials to be sent to various laboratories for tests.

When health officials turned up to collect samples, the Bathini brothers insisted that they bring a court order. After they produced the order, the samples were given.

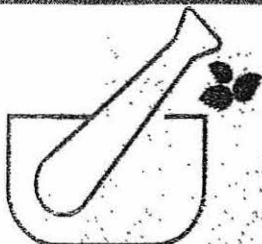
Activists of the Jana Vignana Vedika asked the family to give samples of the Karthika medicine which would be taken by asthma patients in another fortnight. However the Bathini brothers refused to give it.

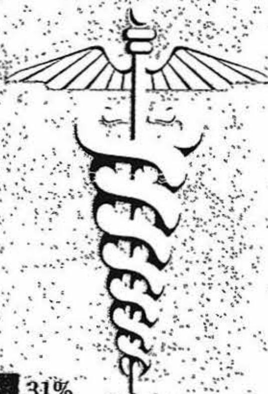
Director of Health, Dr P. Somasekhara Reddy, said that the High Court had ordered officials to collect only the samples of fish medicine. The samples would be sent to laboratories, recognised by the Indian Council of Medical Research.

Deccan Chronicle, June 6, 2005 (Hyderabad Edition).

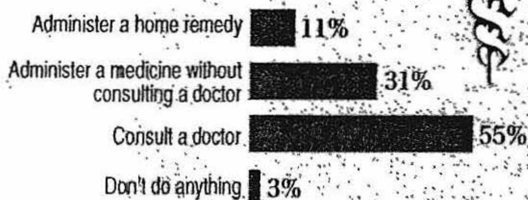
APPENDIX IV

METROMONITOR

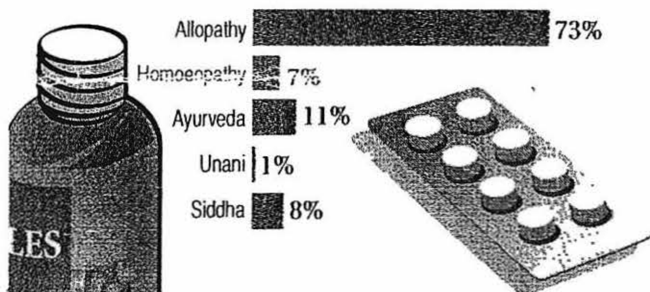




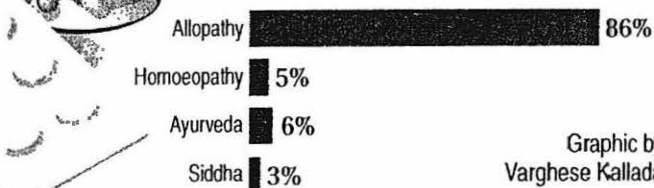
How would you treat a minor ailment ?



Which system of medicine do you believe is most effective ?



Which system do you follow ?



Graphic b
Varghese Kallad

Poll conducted by



The poll was conducted in Chennai among 219 men and women in the 18-45 age group.

The Hindu, June 22, 2004, Metromonitor

APPENDIX V

PHARMACEUTICAL FORMS

AGAMARUNTHUGAL	**PURAMARUNTHUGAL**
(Oral medicines)	(External medicines)
THIRTY TWO	**THIRTY TWO**

SPECIFIC TO SIDDHA SYSTEM OF MEDICINE AND AREA FOR FURTHER RESEARCH

1. CHUNNAM (Potent inorganic oxides)
2. KATTU (Conversion of combustible into non-combustible inorganic)
3. SATHU(Extraction of extractives of inorganic)
4. KAZHANGU (Amalgamation of different inorganics)
5. GURUKUZHIGAI (Conversion of mercury into non-combustible)

CRIS, CHENNAI

PHARMACEUTICAL FORMS OF ORAL MEDICINES

1. Surasam (Decantent)
2. Charu (Juice)
3. Kudineer (Decoction)
4. Karkam (Herbal paste)
5. Utkali (Dough)
6. Adai (Poridge)
7. Chooranam (Powder)
8. Pittu (Steam boiled)
9. Vadagam (Lozenges)
10. Vennai (Butter)
11. Manapaku (Syrup)

CRIS, CHENNAI

12. Nei (Ghee)
13. Rasayanam (Dry confections)
14. Legyam (Confections)
15. Ennai (Oil)
16. Mathirai (Tablets)
17. Kadugu (Filtrates)
18. Pakkuvam (Mixtures)
19. Thenooral (Honey soaked)
20. Theeneer (Distillates)
21. Mezhugu (Waxy)
22. Kuzhambu (Semi Liquid)
23. Pathangam (Sublimates)

CRIS, CHENNAI

24. Chendooram (Red Oxides/Sulphides)
25. Parpam (Oxides)
26. Kattu (Non combustible form of combustible inorganic)
27. Urukku (Solidification)
28. Kazhangu (Amalgam)
29. Chunnam (Strong oxides)
30. Karpam (Black oxides)
31. Sathu (Concentrates)
32. Guruguligai (Mercurial Bolus)

Ref: Siddha Maruthuvanga Churukkam

CRIS, CHENNAI

EXTERNAL MEDICAMENTS

1. Kattuthal (Dressing)
2. Patru (Paste)
3. Ottadam (Fomentation)
4. Pucchu (Anointing)
5. Vethu (Vapour bath/Steam bath)
6. Pottanam (Bolus fomentation)
7. Thokkanam (Oil Massages)
8. Pugai (Fumigation)
9. Mai (Corrylium)
10. Podithimiruthal (Powder Anointing)

CRIS, CHENNAI

11. Kalikkam (Corrilyum)
12. Nasiyam (Nasal instillation)
13. Uuthal (Blowing)
14. Nasiyaparanam (Nasal dusting)
15. Kazhimbu (Ointment)
16. Seelai (Plaster)
17. Neer (Liquid)
18. Varthi (Medicated gauze)
19. Chuttigai (Cauterization by solids)
20. Salagai (Probes)
21. Pasai (Paste)
22. Kazhi (Poultice)

CRIS, CHENNAI

23. Podi (Powder)
24. Murichhal (Bone setting)
25. Keeral (Incision)
26. Karam (Caustics)
27. Attaividal (Leach application)
28. Aruvai (Surgery)
29. Kombukattal (Splints)
30. Urinjal (Aspiration)
31. Kurithivangal (Blood letting)
32. Peechu (Enema)

Ref: Siddha Maruthuvanga Churukkam

CRIS, CHENNAI

APPENDIX VI

LIST B—SIDDHA WORKS—*cont.*

Agastiar—cont.

Name of the work in English.	Number of verses.	Whether printed or not.
Utkarusuttram	...	
Upadesagnananam	51	
Ulokamaranam	150	
Uttumurai	24	Printed.
Emakandam	800	
Emathathuvan	800	
Etohani ...	800	
Karisal ...	300	Printed.*
„ Suttram	40	
Karukkadai	500	
Do.	800	
Do. Vadha Suttram	12	
Do.	48	
Karunai Vakadam	8	Printed.
Karppakkole	48	Do.
Do.	26	Do.
Kalagnanam	120	
Do.	1,000	
Do. Suttram	1,200	
Do. Surukkam	12	
Do. do.	15	
Do. do.	30	
Karpam	500	
Karpamurai Suttram	10	
Kalangu	60	
Karmavipakam	...	
Karmakandam	800	Printed.
Do. Suttram	800	Do.
Do. do.	150	Do.
Kayasiddhi Valalai suttram.	40	
Karana suttram	48	Do.
Kaviyam 1,000 Suttram to	16	Do.
Do. Churkkam to	1	Do.
Do. do.	12	
Gunavakadam	...	Printed.
Gurujayaneer Gangai	60	Do.
Guru-Nadi	100	Do.
Do.	130	
Do.	235	Printed.
Guru Nul (Vaidyam)	600	
Do. (Muppu)	50	Printed.
Kurukkadai Suttram	36	
Do.	600	
Kulirchi Ennai	5	Printed.
Do.	5	Do.
Kuri-nul Suttram	12	Do.
Guru-Murai	...	
Kasari Vidhai	...	
Do. Guru-nul	56	Printed.
Gowmadhi	425	
Kovai Anadinamam	...	
Kovai ...	5	
Sagalakala Gnananam Surukkam.	120	
Do. Suttram	1,200	
Sanjeevi Ennai	5	Printed.
Sadatcharamaral	...	
Sathijalam	...	
Sarakku Saththi	100	
Do.	500	
Sowkarathrthiravookolo	16	
Shanmugajalam	...	
Chaba-Nivarthi	8	Printed.
Sattram	208	
Do.	300	
Jalasuttram	590	
Jalathirattu (7 cantos)	1,100	
Do. (1st cantos)	800	
Jala Nikandu	200	Printed.
Do. do.	18	
Siddhadhi Ennai	8	Printed.
Chirushi Mano Sangeetham.	16	
Sivakuligai	8	Printed.
Sivajalam	...	
Simiturathana Surukkam	360	
Suddhagnanam	9	Printed.
Suddhimurai	80	
Suttra Nikandu	116	
Suttram	205	
Do.	300	
Do.	100	
Do.	50	Printed.
Do.	48	
Do.	30	Printed.
Do.	18	
Do.	14	Printed.
Do.	12	
Do.	12	Printed.
Do.	10	
Do.	10	
Do.	10	
Do.	9	Printed.
Do.	5	Do.
Do.	5	Do.
Do.	5	
Do.	8	
Do.	6	
Do. Kovai	16	
Sukshma-tharisanam	6	Printed.
Gunnam	100	
Do.	30	
Do.	30	Printed.
Do.	16	Do.
Do. (Upadesam)	14	Do.
Do.	13	
Do.	12	
Do.	10	
Do.	9	Printed.
Do.	8	Do.
Do.	6	Do.
Do.	2	
Gnana ula		
Do. Kakkisham	5	Printed.
Do. Kaviyam ...	1,000	Do.
Do. do. suttram	...	
Do. do. do.	1	
Do. Churukkam	12	
Do. do.	16	
Do. Suttram ...	1,200	
Do. do. ...	18	
Do. Pujavidhi	16	
Do. Theekshai Churrukkam.	...	
Chentharam	300	Printed.

* Not the one in manuscripts but some work in print under this name.

Courtesy : Tamil Nadu Achieves, Chennai.

LIST B—SIDDHA WORKS—*cont.*

Name of the work in English.	Number of verses.	Whether printed or not.
Agastiar—cont.		
Obentharam 300—Suttram to.	36	Printed.
Do. do.	16	
Jodhimoni suttram ...	8	
Chwmiyasagaram ...	...	Printed.
Do. Churrukkam to.	...	
Thathvakaviyam ...	1,000	
Thandagam	...	
Do	100	
Do. patchanignanam.	134	
Thirumantram ...	1,500	
Do.	8	
Theekshai padal... ...	5	
Do. Nadi Suttram.	...	
Do. Vidhi ...	200	Printed.
Thyla Surukkam ...	5	
Do. do ...	100	Printed.
Thylam do. ...	500	
Thirunadana Suttram ...	48	
Nadana Kandam ..	350	
Do. Suttram ...	48	
Nanjumuruvu Vaippu ...	5	Printed.
Nayana Vidhi ...	500	
Navakirugha (and Sandhi)	32	
Navaloga Maranam ...	25	
Nasakandam	300	
Nadi	8,000	
Nadi-nul	88	
Do. nidhanam ...	32	
Nalukanda vaidyam ...	1,200	Printed.
Natakam	...	
Nikandu	200 116	
Neertinavagai	20	
Nōthramathrai ...	...	
Noyincharam	67	
Patchai	16	Printed.
Panjagam	...	
Panjakaviya nikandu ...	800	Printed.
Patchani	125	
Do.	300	
Padharthaguna Chintamoni.	...	
Paribhashai	300	
Do. 5 (kandams).	500	Printed.
Paripuranam	1,200	
Do.	400	
Do.	216	
Do	205	
Do.	51	
Pallu	200	Printed.
Basmamurai	200	
Basmam	50	
Pandavaippu	600	Printed.
Balavakadam	1,200	Do.
Do.	350	
Do.	300	
Do.	,200	
Do.	20	
Balagiraga dosham ...	8	
Balavasagam	207	
Pindorppathi	32	Printed.

Name of the work in English.	Number of verses.	Whether printed or not.
Agastiar—cont.		
Pinnul	80	
Putpamalikai	51	
Purana-nul	100	
Purana kaviyam ...	1,000	Printed.
Do. Poojavidhi ...	...	
Do Suttram ...	400	
Do. do.	100	
Do. do.	216	Printed.
Do. do.	205	Do.
Do. do.	50	
Do. do.	16	
Do. Chandrothoyam.	200	
Purath-thurai	16	
Poojavidhi	200	
Do.	16	
Perunulvaidya kaviyam... Do. 4 kandam.	1,500	Printed.
Perunul Kovai Surrukka Vakiyam.	272	
Perunthirattu	...	
Perunkulambu	16	
Maruthvabbaratham ...	...	
Maghathiravagam ...	800	Printed.
Manakkolam	...	
Mathivenba	100	
Moni-Nalayiram ...	4,000	
Mantherogam	50	
Mantherega Kaviyam ..	1,000	Printed.
Do. Nikandu.	...	
Munnul	80	
Muppu	50	
Do.	50	
Do.	50	
Do.	16	
Do.	16	
Do.	30	
Do. Ganthi Thylam ...	16	
Do. Suttram	350	
Do. Deekshai Suttram.	16	
Do. Vagaipadal ...	...	
Do. Suttram	16	
Do. Theekshai ...	40	
Mai-Surukka Suttram ...	51	
Mai-Gnanam	1,500	
Do. ...	1,000	
Do. ...	100	
Mekath Ennai ...	5	
Do. ...	14	
Yogam	6	
Do.	16	
Vakara Suttram	10	
Do.	10	
Do.	13	
Do.	30	
Vakara Mathivenba ...	100	
Valladhi	600	Printed.
Vazhalai	30	
Do.	30	
Do.	30	
Do.	...	
Do.	16	
Do. Surukkam ...	7	
Do. Suttram ...		

LIST B—SIDDHA WORKS—*cont.*

Name of the work in English.	Number of verses.	Whether printed or not.
Agastiar—cont.		
Vazhalai Suttram ...	12	
Vakadam ...	500	
Vakada Suttram ...	300	
Do. Nadi-murai.	1,500	
Vadha Suttram ...	12	
Vadha Suttram ...	100	
Do.	200	
Do.	213	
Do. Surukkam.	6	
Vadham (2 Cantos) ...	300	
Do.	200	
Do.	81	
Do. Kaviyam ...	1,000	Printed.
Do. Chowmiyan ...	1,200	Printed.
Vauthibathi Vaidyam ...	10	
Valai Vakadam ...	...	
Do. Sastram ...	150	
Viyathi Kurippu ...	11	
Do. Varalaru ...	5	
Vishapirathi Visha Thirattu.	...	Printed.
Vishnu Chakkaram ...	2	
Virinun Murdakaikandam..	..	
Venba	...	
Venkaramaluku	...	
Visuri Nul	82	
Vaidyam	16	
Do.	50	
Do.	100	
Do.	100	
Do.	205	
Do.	600	
Do.	150	
Do. Agarathi ...	...	Printed.
Do. Gurunul ...	600	
Do. do. ...	60	
Do. Kommi ...	...	
Do. Karukkadai ...	208	Printed.
Do. Sadhakam ...	...	Do.
Do. Kaviyam ...	1,000	Do.
Do. Do. ...	1,500	
Do. Charam ...	41	
Do. Chintamani ...	4,000	
Do. Suttram ...	1,500	
Do.	1,200	
Do.	205	
Do.	300	
Do.	150	
Do.	100	
Do.	50	
Do.	48	
Do.	36	
Do.	16	
Do.	81	
Chinturam.		
Vaidya Chinturam ...	300	
Do. Nul	...	
Do. Pillaitamil ...	...	Printed.
Do. Marunthukal ...	...	
Do. Murai	...	
Do. Kannadi ...	...	
Do. Ratnakaram ...	...	

Name of the work in English.	Number of verses.	Whether printed or not.
Chinturam—cont.		
21,000	...	
10,000	...	
1,500	...	
1,200 Vakadam	...	Printed.
1,200 Suttram to ...	16	
1,200 Jayaneer suttram to	16	
1,200 First 1,000 ...	...	
225	...	
8	...	
5	...	
600 Suttram to	61	
Jaunkurkku Upadesetta Vaidyam.	600	Printed.
200 Suttram to	13	
150 do.	...	
225 do.	...	
120 do.	...	
67 do.	...	
60 do.	...	
36 do.	...	
Agappai Siddhar.		
Padal	...	Printed.
Vahara suttram	...	
Alukanni Siddhar.		
Padal	61	Printed.
Edaikkadar.		
Sareeram	...	
Padal	69	Printed.
Kartha Siddhar.		
Paripashai Nikandu ...	...	
Kaduvali Siddhar.		
Padal	35	Printed.
Kuthampai Siddhar.		
Padal	...	Printed.
Pompatti Siddhar.		
Padal	...	Printed.
Karugnanam	...	
Rama Devar.		
Karukkadai suttram ...	500	
Kesari	50	
Suttram	380	
Do.	333	
Do.	173	
Do.	81	
Do.	30	
Sirayogam	1,000	Printed.
Do.	200	Do.
Thandagam	100	
Nikandu	570 or 500	
Patchani	100	
Bashai	18	
Do.	18	
Pujavidhi	10	Printed.
Vinodhapatchani ...	108	
Vaidyam	1,500	Printed.
Do.	80	
Do.	1,000	
Yogam	200	

LIST B—SIDDHA WORKS—*cont.*

Name of the work in English.	Number of verses.	Whether printed or not.
Rama Devar—cont.		
Perumnul	500	
Do.	300	
Roma Rishi.		
Ratna surukkam ...	362	
Karumana surukkam ...	51	Printed.
Karpa-murai	20	
Guru-nul	50	
Suttram	500	
Do	100	Printed.
Do.	100	
Do.	50	
Do.	51	
Do.	50	
Do.	25	
Do.	25	
Do.	25	
Do.	20	
Do.	20	
Do	19	
Do.	16	
Do.	16	
Gyanam	100	
Do.	16	
Thirumantram	16	Printed.
Mathanivanasurukkam ...	27	
Do.	16	
Muppusuttram	30	Printed.
Surukkam	16	
Vagarasuttram	27	Do.
Do	16	Do.
Paribashai	300	Do.
Vaidyam	500	Do.
Urvasi.		
Rasavadachitka (2 parts)	...	Printed.
Ratnasurukkam	...	
Pancharatnam	200	Printed.
Vaidyachitka	...	
Kadai Pillai.		
Amrutha Bodhakam ...	125	
Kamalamuni.		
Gyanasurukkam	5	
Vaidiyam	300	
Kowpala Siddhar.		
Anikkovai	51	
Karuvurar.		
Attamachittu	100	
Karukkadai Mi	30	
Santha Natakam ...	...	
Suttram	116	
Do.	16	
Gnanam	7	
Palathirattu	300	Printed.
Poojavidhi	80	Do.
Do. Valai ...	5	
Manthirkam	...	
Vadhakaviam	700	
Vaidya Noudi Natakam.	...	
Kalanginadhar.		
Kurunthirattu	...	
Perunthirattu	...	
Kalanginadhar—cont.		
Suttram	36	
Do.	51	
Patchani and Salliya Mulam.	45	
Kalamegeswarar.		
Thampirasuthi ...	8	
Thampiraauttram ...	...	
Rasitham	8	
Kurmanandhar		
Suttram	51	
Korakkar.		
Suttram Ashatakarmam ..	108	
Kalpanthanam	...	
Vaidyangam	...	
Kosigar.		
Agarasuttram	...	
Chinthamoni (1st and 2nd part)	...	
Kowpala Siddhar.		
Anikkorvai	55	Printed.
Konyanar.		
Authisayasuttram ...	27	
Do. ...	50	
Iynnurthirattu	500	
Kurukkuligai	8	Printed.
Karppam	...	
Kandam first	500	Printed.
Do. middle	500	
Do. last	500	
Muthal Kanda Suttram...	40	
Kadai Kanda Suttram ...	60	
Nadu Kanda Suttram ...	...	
Mukkanda Suttram ...	17	
Kalaigaanam	200	
Sathru Mithru	21	
Suthachaithanya Vedhanta Sastram.	16	
Gaanam	500	
Do.	800	
Do.	51	
Do. Kaviyam ...	...	
Do. Vedantam ...	107	
Do. in three cantos ...	...	
Thathvanul	...	
Thandagam	...	
Tharkanul	18	
Thirumantram	8	Printed.
Thekshavidhi Suttram ...	60	
Thekshai	60	
Thurusuguru	31	
Patchani	108	
Poojavidhi	15	Printed.
Do.	11	
Do.	81	
Mupputheekshai	40	
Muppu	4	
Vadha Kaviyam... ...	3,000	Printed.
Valai Kommi	...	
Vedandam	107	
Vaidyasuttram	16	
Do.	800	

LIST B—SIDDHA WORKS—*cont.*

Name of the work in English.	Number of verses.	Whether printed or not.
Sattamune.		
Karpavidhi	100	Printed.
Sarakkuvaippu	...	
Suttram	200	
Do.	201	
Do.	52	Printed.
Do.	16	
Do.	10	
Do.	8	
Ganam Mūn ...	100	Printed.
Do. Pin	100	Do.
Do.	200	Do.
Do.	35	
Do.	3	
Tharkam	50	
Thirikandam	...	
Navaratnavaippu ...	...	
Nikantu	1,200	Printed.
Do. Suttram... ...	53	
Purana do. ...	25	
Yogatheekshai	...	
Vadhakaviyam	1,000	
Theekshavidhi	200	
Sivānar		
Ashtakarmam ...	...	
Sivavakkiar.		
Nadi-Parikshai	33	Printed.
Chokkanadhar.		
Suttram	...	
Damaranandhar.		
Suttram	16	
Pathanjali.		
Madhi-Venba	...	
Vadhasuttram	20	Printed.
Punnakkeesar.		
800		
Putharvannan.		
Shastram	17	
Sundaranandhar.		
Ashtakarmam	35	
Ayulvedapodhuvidhi ...	...	Printed.
Kesari	55	
Surukkam	500	
Suthavidhai	200	
Do.	100	
Suttram	25	
Do.	16	
Do.	6	
Thandagam	...	
Theekshavidhi	51	
Poojavidhi	37	Printed.
Manikandam	1,000	
Vinodha suttram ...	...	
Vedhai	1,050	
Vaidyathirattu	...	
Jeevaratnagaanam ...	100	
Ganam	51	
110		
25		

Name of the work in English.	Number of verses.	Whether printed or not.
Subbramaniyar.		
Ganam		
Do.	2,000	Printed.
Do.	500	Do.
Do. (Kalai).	500	
Do. (Upadesam)	200	Printed.
Do. (Suttram).	100	Do.
Do.	32	Do.
Sudhar.		
Vakkiyam	...	
Nadi	30	
Suttram	100	
Do.	110	
Rajanka-nadi	25	
Surianandhar.		
Suttram	13	
Thanvanthari.		
Karisal	...	
Kalaiganam	500	Printed.
Kaviyam (Vaidyam) ...	1,000	Do.
Do. (Ganam) ...	...	
Do. (Vadham) ...	800	
Guronul	500	
Chimuttu Ratna Surukkam.	371	Printed
Shukshma Vaidyam.		
Saineer	50	
Ganam	12	
Thandagam	100	
Thailam	500	Printed.
Nadi-nul	174	
Nikandu Karukkadai ...	300	Printed.
Mappu	40	
Vaidyam	1,500	
Do.	1,200	
Do.	200	
Do. (Chintamoni).	100	
Do. 143 Key to 1,200	...	
Do. 71 Suttram to 10,000	...	Printed.
Do. (Chintamoni)	10,000	
Dhakshnamurthi.		
Rasamoni	14	
Udarkuru Suttram ...	48	
Do. Murai.	30	
Kalaigyanam	1,200	
Do.	500	
Kaviyam	1,000	
Sayadarsanam	...	
Jalam 6 cantos	...	Printed.
Sowmia sagaram ...	1,500	
Do. jalathirattu ...	500	
Thirumantram	1,500	
Theekshai	...	
Patshani	110	Printed.
Paribashai	500	
Vakara Sowmia sagaram.	500	
Vazhalai	30	
Do.	80	

LIST B—SIDDHA WORKS—*cont.*

Name of the work in English.	Number of verses.	Whether printed yet or not.
Tirumular.		
Ayuthavarka-nul	...	
Karukkadai	600	Printed.
Giranthi Ennai	8	Do.
Kuligai	50	
Gurumurai	...	
Sivayogadeekshai ...	215	
Sowmia sagaram ...	...	
Ganasurukkam ...	...	
Thambanakuligai ...	51	
Thaandagam	...	
Thirumantram	3,000	
Deekshavidhi	215	
Navaratnachintamoni ...	...	Printed.
Nadhanthakurippu ...	11	Do.
Nadi-Anthadhi	53	Do.
Nikandu	300	
Vadhasuttram	300	
Vaidyam	600	Printed.
Do.	8,000	
Do.	3,000	
Do. (Karukkadai) ...	600	Printed.
Do.	120	
Do.	1,000	Printed.
Thiruvalluvar.		
Gnavetti	1,500	Printed.
Navaratnachintamoni ...	800	Do.
Pancharatnam ...	500	
Navaratna surukkam ...	300	
......	100	
......	50	
Pari Muppu	30	Printed.
......	26	
......	16	Printed.
Pancharatnam	11	Do.
Nadanda Thiravukole ...	9	Do.
Theyraiyar.		
Sigamoni Venba ...	...	
Nikandu	...	
Sagarappa	...	
Kappiam	...	
Tharu	...	
Natakam	...	
Natakam with commentary.	...	
Anthathi-Yamugam ...	...	
Mega-Vannam	...	
Nanmalai	...	
Yamuga Venba	...	Printed.
Do. with notes and commentary.		Do.
Ethugaipa	...	
Karisal	..	Printed.
Mahagunapadam ...	...	Printed partly with commentary.
Thinakkramalankaram ...	...	
Piradhanagunamul Tharu	...	
Ohigiohalkkramam ...	...	
Vaidaya Pallu-Natakam.	...	
Theyraiyar—cont.		
Maruthubharatham ...	...	Printed.
Neer-kuri		Do.
Nai-Kuri	...	Do.
Thylavarga surukkam ...	...	Do
Nōi-marunthalavai ...	...	
Ennalalavai	...	
Of above namesake.		
Vaidyam	500	Printed.
Do.	1,000	Do.
Do.	1,500	Do.
Do.	100	Do.
Do.	300	
Do. (Petty works) ...	200	
Nandeesar.		
Purana chaitya Vaidyam.	1,200	
Suttram to above 1,200.	500	
Do. do.	200	
Do. to 200	100	
Do. to 100	50	
Purva-muppu-suttram ...	12	
Poojavidhi	12	Printed.
Madhisaippa	100	
Muppranavasuttram ...	37	Printed.
Vazhalai	33	
Vadhasuttram	30	
Vaidyasuttram	200	
Do. to 200 ...	50	
Do. to 50	30	
Do. to 50 ...	25	
Do. to 25 ...	16	
Do. ...	100	
Do. Thiruvaranam ...	50	
Do. do. ...	68	
Noertinakkuru	130	
Vaidya suttram	32	Printed.
Do.	1,200	
Do.	1,000	
Do.	600	
Udhichayam (Osai Nikandu).	300	
Udhichayam Suttram to 300.	100	
Udhichayam Suttram to 100.	50	
Udhichayam Suttram to 50.	36	
Udhichayam Suttram to 36.	25	
Udhichayam Suttram to Vadhamuli 25 Thiravagam.	15	
Udhichayam to Udichayam Suttram 15.	12	
Udhichayam Suttram to 12.	8	
Udhichayam Suttram to 8.	5	
Udhayathethaham (Udichaya Suttram).	100	
Karachaippa	800	
Do. Venba ...	100	
Karukkadai	800	Printed.
Kalaiganam	1,000	Do.

LIST B—SIDDHA WORKS—*cont.*

Name of the work in English.	Number of verses.	Whether printed yet or not.
Nandeesar—cont.		
Kaithalasuttram ...	5	
Do. ...	8	
Sagalavishakuligai ...	8	Printed.
Suttram	100	
Ganam	100	Printed.
Thathva-nadi	...	
Thandagam	...	
Thiravagam	11	Printed.
Nadi	90	
Nikandu	300	
Neelakandavalai Suttram.	100	
Padal	8	
Pranava Suttram ...	12	Printed.
Do. Suttram ...	15 or 16.	Do.
Do. Nul Mula-Nikandu.	300	
Pranavam	50	
Do.	12	
Nakkeera Nayanar.		
Muppu Chunnam ...	29	
Palathiar.		
Vadhasuttram ...	300	Printed.
Ganakarpam	222	Do.
Pulippani.		
Chimishvidhai	...	
Jalam	300	Printed.
Palathirattu	...	Do.
Vaidyam	500	Do.
Karpa-murai	70	Do.
Chidambaram	25	
Brhma Muni.		
Karukkadai	380	Printed.
Suttram	386	
Do.	385	
Do.	360	
Perunul in 3 cantos ...	...	
Visham and Paduvan (Medicines for).	23	
Vaidyam	800	
Do	700	Printed.
Do.	100	
Do.	56	
Bogar.		
Ashtakarmayogam ...	...	
Uparasa Nikandu ...	..	
Uloka nidhi	16	
Karukkadai	500	
Karpam	340	
Do.	700	
Karachunnam	...	
Chikichai Venba ...		
Sarakku Vaippu ...	800	Printed.
Sudalaisuttram	6	Do.
Suttram	8	
Vaidyasuttram (Pillai Thosham).	16	
Vaidyasuttram	16	
Jananasagaram	557	Printed.
Ganam	100	Do.
Parangi Pashana Vaippu.	8	Do.

Name of the work in English.	Number of verses.	Whether printed yet or not.
Bogar—cont.		
Poojavidhi	44	Printed.
Nikandu	1,200	Do.
Do. Suttra Surukkam.	62	
Nattira Roga Thylam ...	9	Printed.
Venba	...	
Vedhanda Suttram ...	8	
Kandam	7,000	Printed.
Do. Suttram ...	700	Do.
Padal	700	
Vaidyam	700	Printed.
Vada Suttram	4	
Mocha Muni.		
Gunavakadam	20	
Guru Muthrai	5	
Sanni Kiyazham ...	8	Printed.
Sarakku Vaippu ...	800	
Jalakandam	800	
Do.	30	
Suttram	11	Printed.
Suttra Vidhi	...	
Sulai Marunthu	223	
Jāna Nul	20	
Ganam (3 cantos) ...	..	
Thiravagam	800	
Thirumantram	300	
Vellai	300	
Nadhandha Saram ...	152	
Nikandu	105	
Nūl	150	
Perunūl Kaviyam ...	800	Printed.
Do. Suttram.	7	Do.
Do. do.	8	Do.
Do. Pirivu.	800	
Vadha Kandam	300	
Isthula Kandam ...	...	
......	1,330	
......	360	
Ula	1,000	
Do.	1,700	
Karisal	...	
Do.	36	Printed.
Kal-nandu	...	
Kommi	1,133	
Do.	300	
Surukkam	100	Printed.
Chigichai	500	
Do. Sara Sangragham.	...	Printed.
Chintamoni Nidhanam Medicine.	800	Do.
- Do.	400	
Suttram	100	
Nadi-Nidhana Chintamoni.	...	
Paripuranam	400	
Puranam	100	Printed.
Perunūl Vaidya Kaviam.	1,000	Do.
Madhi Venba ...	120	Do.
Vadha Kandam Muthal (1st).	1,000	Do.
Vadha Kandam Errandu (2nd).	1,000	Do.

Name of the work in English.	Number of verses.	Whether printed yet or not.
Yugi Muni.		
Vadha Kandam Munru (3rd).	162	
Vadha Kandam (5th) ...	217	
Vadha Kandam (6th) ...	171	
Vadham	708	
Vadhanga Deeksha Vidhi.	302	Printed.
Vadha Chintamoni ...	239	
Vadha Vaidya Vilakkam,	199	Printed.
......	1,200	Do.
......	435	
......	200	
......	200	
......	100	
Mula Guru.		
Surukkam		
Yucob.		
Work	760	

Name of the work in English.	Number of verses.	Whether printed yet or not.
Valmikar.		
Nadi	100	
Suththa Ganam	16	
Do.	11	
......	100	
Viyakkramapadhar.		
Ganasuttram	300	
Veerama Muni.		
Vagada Thirattu, first part.	...	Printed.
Vagada Thirattu, second part.	...	Do.
Nasa Kandam	100	
Shaik Marith.		
Kakkisham	30	
Viyasar.		
Vaidyam		

Miscellaneous works—whose authors are not known (or clearly known).

Uzhikkarthu Suttram.
Ettiya Nul.
Oushada Vivaranam.
Do. Muraigal.
Kodungkodasuri.
Sarasankiraga Nikandu.
Sura Shastram.
Siddhararudam.
Thanavagadam.
Thyla Muraigal.
Nakshatra Malai.
Nadi Sastram.
Nasigasuranam.
Nidhi Nisshaba Vivaranam.
Neelakanda Valai Suttram.
Do. Shastram.
Pambu Marunthugal.
Bala Vaidyam.
Bala Raksha Vidhi.
Bethi Thylam.
Vagada Sura Nūl.
Vaidya Shastram.
Do. Virudhu Nūl Tharkam.

Sanskrit works in Tamil (all in print).

Ashtangahirudayam (Sareerasthanam).
Sarangadharar.
Vakbhattam.
Jeevarakshamirtham.

LATEST WORKS BY VAIDYAS OTHER THAN SIDDHAS, ETC. (ALL IN PRINT).

Anuboga Vaidya Navaneetham (in 10 parts).
Do. Brahma Rahasiam.
Anatomy, etc.
Abhyasa Chakkram.
Asvasastram.
Athma Rakshamirtham.
Asavarishtam.
Adi Samoodrigam.
Ayulvedha—Surukkam.
Do. Siromoni.
Do. Kalanjiam.
Do. Chikichasara Saugraham.
Do. Paravaram.
Arokiadeepavachanam.
Rana Vaidyam.
Do. Chintamani.
India Samayal Sastram.
Hindu Kudumba Vaidya Chintamani.
Do. Bala Vaidyam.
Rana Vaidya Chintamoni.
Raja Vaidya Bodhini.
Rasavadha Chintamani in 2 parts.
Do. Manjeri.
English and Tamil :—
Materia Medica.
Vaidya Chintamoni.
Do. Sangragam.
Gangadariam.
Kadukkaiprabhava Bodhini.
Kannusawmiyam.
Karuppa Sastram.
Kaviraja Segaram (2 parts).
Kalnadai Viyadi Kurippu.
Kudumba Savarakshani.
Kaimurai Vaidyam.
Saguna Sastram.
Sara Nūl.
Sarabhendra Kapha Marunthu Manjeri.
Do. Meka Nivarana Bodhini.
Sareera Sastram.
Sarva Visha Murippu.
Chikicha Sara Sangragam.
Do. Ratna Deepam.
Chisu Vurpatti Chintamani.
Siddhar Ragasiam.
Siravaga Nivrana Bodhini.

APPENDIX VII

YEARWISE REGISTERED PRACTITIONERS UNDER AYUSH SINCE 1980 (As on 1st January)

Year	AYURVEDA			UNANI			SIDDHA			HOMOEOPATHY			TOTAL		
	IQ	NIQ	Total	IQ	NIQ	Total	IQ	NIQ	Total	IQ	NIQ	Total	IQ	NIQ	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1980	88265	83893	220497	7049	11080	27166	1594	16577	18171	26703	79209	105912	123611	190759	371746
1981	95497	87567	232227	7477	11401	28000	1613	16577	18190	29903	79590	109493	134490	195135	387910
1982	85227	99373	233824	7543	17172	28737	1664	16693	18357	33288	79350	112638	127722	212588	393556
1983	86844	95064	232190	7596	16104	27736	1103	10373	11476	37178	78532	115710	132721	200073	387112
1984	93340	95395	243153	7912	16051	28021	1133	10376	11509	41641	80532	122173	144026	202354	404856
1985	100085	96319	251071	8291	16101	28382	1156	10376	11532	43966	79886	123852	153426	202682	414837
1986	108753	101224	264800	8508	16119	28715	1206	10375	11581	48955	82136	131091	167422	209854	436187
1987	115427	101253	271696	8835	16130	29097	1257	10375	11632	55312	82195	137507	180831	209953	449932
1988	185701	100804	306740	12648	16238	29701	1310	10334	11644	61547	81833	143380	261206	209209	491465
1989	194589	100652	315719	12694	21294	34886	1383	10334	11717	67485	81381	148866	276151	213661	511188
1990	216344	100926	337966	13116	21314	35350	1467	10334	11801	69194	79513	148707	300121	212087	533824
1991	235388	103254	339200	13936	21697	35633	1281	10334	11615	72212	80309	152521	322817	215594	538969
1992	243537	110328	354423	15338	24131	39469	1656	10334	11990	75709	80425	156134	336240	225218	562016
1993	243347	110019	353924	15675	24127	39802	1660	10334	11994	80626	82140	162766	341308	226620	568486
1994	245553	109131	354684	15560	23990	39550	1561	10334	11895	83779	83318	167097	346453	226773	573226
1995	251262	104554	355816	16809	24018	40827	2103	10334	12437	89309	83314	172623	359483	222220	581703
1996	254538	104026	358564	17405	24015	41420	2116	10334	12450	91259	83305	174564	365318	221680	586998
1997	261906	98384	360290	18294	21203	39497	2446	10334	12780	96803	82140	178943	379449	212061	591510
1998	265743	98142	363885	18755	21203	39958	2577	10334	12911	103073	81821	184894	390148	211500	601648
1999	270349	98148	366812	19685	21205	40748	2581	10334	12915	106723	81804	188527	399338	211491	609002
2000	330576	96928	427504	20934	21511	42445	4381	11218	16599	110317	83830	194147	466588	214536	681124
2001	333956	96934	430890	21597	21511	43108	4613	12484	17097	128142	69110	197252	488714	200088	688802
2002	332372	97891	430263	21842	21488	43330	4802	12590	17392	130875	69128	200003	490324	201146	691470
2003	333742	98883	432625	21501	21332	42833	4951	12599	17550	132356	69128	201484	493033	201991	695024

FIGURES ARE PROVISIONAL   IQ: - Institutionally Qualified   NIQ : Non-Institutionally Qualified

NOTE: Total of IQ and NIQ registered Practioners of Ayurveda and Unani may not tally for some years as break-up has not been furnished by some States / Uts.

Courtesy: AYUSH IN INDIA - 2003. Planning & Evaluation Cell, Dept. of Ayush, Ministry of Health & Family Welfare, Govt. of India, New Delhi.

APPENDIX VIII

STATE-WISE NUMBER OF AYUSH REGISTERED PRACTIONERS AS ON 1.1.2003

Sl No.	STATES/U.T.'s	AYURVEDA			UNANI			SIDDHA			HOMOEOPATHY			TOTAL		
		IQ	NIQ	Total	IQ	NIQ	Total	IQ	NIQ	Total	IQ	NIQ	Total	IQ	NIQ	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1.	Andhra Pradesh	5762	9420	15182	2576	2425	5001				7158	1996	9154	15814	13888	29702
2.	Assam	250		250			0				645	389	1034	895	389	1284
3.	Bihar	131121		131121	3665		3665				26224		26224	161010	0	161010
4.	Chhatisgarh	103		103	1		1							104	0	104
5.	Delhi	2264		2264	1049		1049				2482	323	2805	5795	323	6118
6.	Gujarat	13682	3591	17273	51	191	242				5031	71	5102	18764	3853	22617
7.	Haryana	5391	13853	19244	140	1523	1663				309	5181	5490	5840	20557	26397
8.	Him. Pradesh	2423	4504	6927	23	433	456				131	969	1100	2577	5906	8483
9.	Jammu & Kash.	343		343	162		162						0	505	0	505
10.	Karnataka	9256	5572	14828	403	535	938	2		2	5448	1540	6988	15225	7647	22872
11.	Kerala	7301	6112	13413	5	51	56	138	1218	1356	6654	1489	8143	14098	8870	22968
12.	Madhya Pradesh	46300	1302	47602	508	101	609				7310	1105	8415	54118	2510	56628
13.	Maharashtra	37695	14677	52372	2884		2884				25867	2044	27911	66446	16721	83167
14.	Meghalaya			0			0				13	216	229	13	216	229
15.	Nagaland			0			0				8	1989	1997	8	1989	1997
16.	Orissa	2631	1179	3810	16		16				2821	2134	4955	5468	3313	8781
17.	Punjab	5998	14381	20379	422	5189	5611				2295	5257	7552	8715	24827	33542
18.	Rajasthan	19519	4006	23525	1132	417	1549				1823	2426	4259	22474	6849	29323
19.	Tamil Nadu	1588	1954	3542	338	642	980	4811	11381	16192	1439	15176	16615	8225	29153	37378
20.	Uttar Prades	40362	17162	57524	8097	4920	13017				12550	13251	25801	61009	35333	96342
21.	West Bengal	1753	1170	2923	29	4905	4934				24076	13347	37423	25858	19422	45280
22.	Chandigarh			0			0				72	225	297	72	225	297
	TOTAL	333742	98883	432625	21501	21332	42833	4951	12599	17550	132356	69128	201484	493033	201991	695024

Note: Registered Practioners of Naturopathy are included in Columns 15, 16 and 17. (Andhra Pradesh: IQ-318/NIQ-47, Karnataka : IQ-116, Madhya Pradesh: NIQ-2 and Tamil Nadu: IQ-49)
The information pertains to 1.1.2002 for Mahrashtra, Punjab, T.J. (ISM), Assam, Delhi, Haryana, Meghalaya, Nagaland, Rajasthan, W.B. (Homoeo)
1.1.2001 for Kerala, Orissa and Punjab (Homo). 1.1.2000 for Bihar, W.B., (ISM), Chandigarh (Homo), 1.1.99 for Maharashtra (Homoeo) and 1.1.1994 for Assam and Jammu & Kashmir as current information is not available.
Courtesy: AYUSH IN INDIA - 2003. Planning & Evaluation Cell, Dept. of Ayush, Ministry of Health & Family Welfare, Govt. of India, New Delhi.